

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA DAILY LOG -- B

DATE

18 Jan 1965

Time at sunrise = Position at sunrise = 0719 159-39W 20-27.5N
Time at sunset = Position at sunset = "PH" 1832
Miles traveled from 0000 hours to sunrise = 75 mi (73)
Miles traveled from sunrise to ~~sunset~~ "PH" = ~~75~~ 112 mi (118)
Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0644	Celestial	159-47W	20-53.5N
2.	1030	LORAN	159-09.2W	20-40N
3.	1145	LORAN	159-01W	20-47.8N
4.	1500	LORAN	158-29W	20-58N
5.				
6.				

DATE

Time at sunrise = Position at sunrise =
Time at sunset = Position at sunset =
Miles traveled from 0000 hours to sunrise =
Miles traveled from sunrise to sunset =
Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA DAILY LOG -- B

DATE Jan 4 1965

Time at sunrise = Position at sunrise = IN Port

Time at sunset = Position at sunset = 1808 30-49N 158-41W

Miles traveled from 0000 hours to sunrise = IN Port

Miles traveled from ^{Track}~~sunrise~~ to sunset = 65 mi (69)

Miles traveled from sunset to 2400 hours = 57 mi (64)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1150 W	Visual	21° 06' N	158° 04' W
2.	1310 W	LORAN	20° 59' N	158° 10' W
3.				
4.				
5.				
6.				

DATE JAN 5 1965

Time at sunrise = Position at sunrise = 0720 20° 09' N 160° 45' W

Time at sunset = Position at sunset = 1825

Miles traveled from 0000 hours to sunrise = 55 (59) 19° 34.5' N 162° 11' W

Miles traveled from sunrise to sunset = 88 (87)

Miles traveled from sunset to 2400 hours = 44 (43)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0118 W	LORAN	160° 01' W	20° 28' N
2.	0900 W	"	160° 57' W	20° 04' N
3.	1142 W	"	161° 19' W	19° 56' N
4.	1515 W	"	161° 49' W	19° 42' N
5.	1811 W	"	162° 07' W	19° 36' N
6.				

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AT SEA DAILY LOG -- B

DATE Jan 6 1965

Time at sunrise = Position at sunrise = 0729 18°47.2'N 163°50'W
Time at sunset = Position at sunset = 1742 18°12'N 165°23'W
Miles traveled from 0000 hours to sunrise = 61 mi (59)
Miles traveled from sunrise to sunset = 95 mi (98)
Miles traveled from sunset to 2400 hours = 61 mi (63)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	820	LORAN	163-56 W	18-43 N
2.	1130	LORAN	164-24 W	18-32 N
3.	1815	(CELESTIAL) LORAN	165-25 W	18-12 N
4.	2350	LORAN	166-17 W	17-48 N
5.				
6.				

DATE Jan 7 1965

Time at sunrise = Position at sunrise = 0642 167-31W 17-22 N
Time at sunset = Position at sunset = 1800 169-07W 16-44 N
Miles traveled from 0000 hours to sunrise = 72 mi (73)
Miles traveled from sunrise to sunset = 97 mi (91)
Miles traveled from sunset to 2400 hours = 52 mi (54)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0620	CELESTIAL	167-29 W	17-23 N
2.	0820	LORAN	167-49 W	17-16 N
3.	1130	LORAN	168-04.5 W	17-07.5 N
4.	1915	RAOAR & VISUAL	169-18 W	16-40 N
5.				
6.				

SMITHSONIAN INSTITUTION
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AT SEA DAILY LOG -- B

DATE

8 Jan 1965

Time at sunrise = Position at sunrise = 0644 15-05 N 168-56 W
Time at sunset = Position at sunset = 1805 13-35 N 169-37 W
Miles traveled from 0000 hours to sunrise = 52 mi (54)
Miles traveled from sunrise to sunset = 119 mi (112)
Miles traveled from sunset to 2400 hours = 66 mi (64)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0615	Celestial	168-55 W	15-08 N
2.	1200	LAN O	—	14-18.5 N
3.	1840	Loran & Celestial	169-46 W	13-26 N
4.				
5.				
6.				

DATE

9 Jan 1965

Time at sunrise = Position at sunrise = 0648 171-12 W 12-22 N
Time at sunset = Position at sunset = 1805 171-18 W 13-17 N
Miles traveled from 0000 hours to sunrise = 52 mi (54)
Miles traveled from sunrise to sunset = 91 mi (83)
Miles traveled from sunset to 2400 hours = 56 mi (54)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	Loran	171-19 W	12-16
2.	1130	Loran	171-44 W	12-42 N
3.	1616	Loran	171-25 W	13-09 N
4.	1836	Celestial	171-14.5 W	13-20 N
5.				
6.				

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SMITHSONIAN INSTITUTION
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AT SEA DAILY LOG -- B

DATE 10 Jan 1965

Time at sunrise = Position at sunrise = 0647 14-39N 170-02W
Time at sunset = Position at sunset = 1800 15-02N 170-03W
Miles traveled from 0000 hours to sunrise = 57 mi. (56)
Miles traveled from sunrise to sunset = 85 mi. (82)
Miles traveled from sunset to 2400 hours = 53 mi. (53)

	TIME OF FIX	TYPE OF FIX	LONGITUDE W	LATITUDE N
1.	0615	Celestial	170-05W	14-35N
2.	1835	Celestial	170-05W	14-59.9N
3.	1938	Loran	170-12W	14-56N
4.	2205	Loran	170-30W	14-39.5W
5.				
6.				

DATE 11 Jan 1965

Time at sunrise = Position at sunrise = 0652 13-51N 171-49W
Time at sunset = Position at sunset = 1820 14-04N 172-53.5W
Miles traveled from 0000 hours to sunrise = 74 mi. (73)
Miles traveled from sunrise to sunset = 108 mi. (106)
Miles traveled from sunset to 2400 hours = 49 mi. (50)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0618	Celestial	171-42W	13-56N
2.	1012	Celestial & LORAN	172-15.5W	13-33N
3.	1530	Celestial & Loran	172-53.5W	13-43.5N
4.	1850	Celestial	172-51.2W	14-06.3N
5.				
6.				

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AT SEA DAILY LOG -- B

DATE

12 Jan 1965

Time at sunrise = Position at sunrise = 0655 171-41W 15-29N
Time at sunset = Position at sunset = 1815 171-11W 16-34N
Miles traveled from 0000 hours to sunrise = 62 mi (60)
Miles traveled from sunrise to sunset = 98 mi (98)
Miles traveled from sunset to 2400 hours = 59 mi (53)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0620	Celestial	171-43W	15-26N
2.	1850	Celestial	171-15W	16-37N
3.				
4.				
5.				
6.				

DATE

13 Jan 1965

Time at sunrise = Position at sunrise = 0701 172-46W 15-18.2N
Time at sunset = Position at sunset = 1825 174-20W 14-52N
Miles traveled from 0000 hours to sunrise = 75 mi (74)
Miles traveled from sunrise to sunset = 116 mi (116)
Miles traveled from sunset to 2400 hours = 40 mi (44)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0625	Celestial	172-41.5W	15-22N
2.	1242	Celestial & Loran	173-25W	14-23N
3.	1855	Celestial	174-24.8W	14-55.5N
4.				
5.				
6.				

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA DAILY LOG -- B

DATE JAN 14 1965

Time at sunrise = Position at sunrise = 0704 173-21W 16-02N
Time at sunset = Position at sunset = 1815 171-31W 16-50N
Miles traveled from 0000 hours to sunrise = 57 mi (59) 37
Miles traveled from sunrise to sunset = 125 mi (122) Col
Miles traveled from sunset to 2400 hours = 36 mi (41)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0630	Celestial	173-28W	15-57
2.	1530	Celestial & Loran	172-03W	16-53N
3.	1800	LORAN	171-32W	16-52N
4.				
5.				
6.				

DATE JAN 15 1965

Time at sunrise = Position at sunrise = 0653 16-50N 169-56W
Time at sunset = Position at sunset = 1816 17-06N 168-52W
Miles traveled from 0000 hours to sunrise = 58 mi (59) ship maneuvers
Miles traveled from sunrise to sunset = 60 mi (63) cargo check
Miles traveled from sunset to 2400 hours = 47 mi (47)

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0606	VISUAL	168-57W	16-50N
2.	1235	VISUAL & RADAR	169-36.7W	16-54.1N
3.	1845	CELESTIAL	168-47W	17-06N
4.				
5.				
6.				

Col
170-03
Col

AT SEA DAILY LOG -- B

DATE 16 Jan 1965

Time at sunrise = Position at sunrise = 0643 166-48W 17-58N
Time at sunset = Position at sunset = 1746 165-10W 18-22N
Miles traveled from 0000 hours to sunrise = 83 mi. (88)
Miles traveled from sunrise to sunset = 97 mi. (101)
Miles traveled from sunset to 2400 hours = 61 mi. (64)

	TIME OF FIX	TYPE OF FIX	LONGITUDE W	LATITUDE N
1.	0730	LORAN	166-41W	18-01N
2.	1135	LORAN	166-00W	18-14N
3.	1820	Celestial	165-02W	18-22.5N
4.	1835	LORAN	164-59W	18-04N
5.				24?
6.				

DATE 17 Jan 1965

Time at sunrise = Position at sunrise = 0710 19-10N 163-11.1W
Time at sunset = Position at sunset = 1835 19-37.2N 161-38.1W
Miles traveled from 0000 hours to sunrise = 62 mi. (64)
Miles traveled from sunrise to sunset = 91 mi. (98)
Miles traveled from sunset to 2400 hours = 55 mi. (54)

	TIME OF FIX	TYPE OF FIX	LONGITUDE W	LATITUDE N
1.	0643	Celestial	163-16W	19-08.5N
2.	1900	Celestial	161-33W	19-38N
3.				
4.				
5.				
6.				



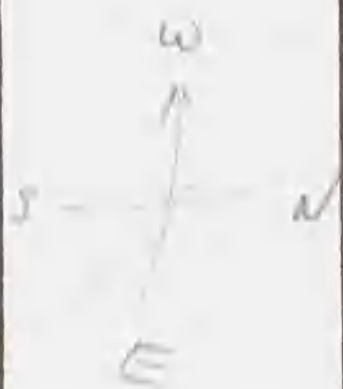
DATE Jan. 4, 1964
Pg. # Page 1

time	species	#	dir.	hgt.	remarks	loc.
					Seen along channel 2 BC-Night Herons, 1 ♀ Brown Booby on Buoy, 1 Sanderling, 1 Golden Plover, 1 R. Turnstone.	
1015	Watch Begun					
1021	Pom. Jaeger	2			300 yds - identification by size 10:34 - large shark seen cruising off stb. fin brownish-grey about 1 foot out of water (50 yds. off)	
1053	Pom. Jaeger	1			(?) on Pom. Jaeger indicates tail wedge not seen.	
1117	Pom. Jaeger	1			Sitting on water on port side.	
1125	Pom. Jaeger	1				
1135	Pom. Jaeger	1			Circling ship - sev. hunched	
1135	Shearwater sp.	1			200 yds off bow.	
1145	Pom. Jaeger	3			outside ship 100-200 yds off side 1 in light	
1207	Pom. Jaeger	4			phase had def. Tail characteristic sev. hunched	
1207	Redf. Booby	1			ad. - 150 yds at closest	
1210	BFA	2			Following in wake of ship	
1215	Pom. Jaeger	1			(white neck, tail showing)	
1229	Redf. Booby	2			4-500 yds port.	
1229	Sooty tern	1			high - far out	
F 1237	terns	7			front	
F 1245	Rf Booby	1				
	wedge t. tern	1				
	terns	4			possibly same as 7 above.	
1300	Jaeger sp.	5			probably 4 previously recorded + 1 new } sitting together	
1300	B. F. Alb.	3			" 2 " " + 1 "	
1307	Booby	1			RF or BF - 800-1000 yds off strb	
1320	Sooty Tern	1		200'		
1328	Pom. Jaeger	1			Joined previous 5 - 3 flying, 3 sitting	
F 1407	Jaeger (P)	1				
	Sooty Tern	5			low over water - dark	
	RFB	2			flying high	
1409	RFB	1			1 ad, ? imm	
1411	P. Jaeger	3			ad - sitting on water (not with flock which was loose aggregate)	
1432	P. Jaeger	1			sitting on water.	
1433	RFB	1			adult	



DATE Jan 4
Pg. # Page 2

time	species	#	dir.	hgt.	remarks	loc.
1457	Leach's P	1		low		
1504	Pomarine Jaeger	1			rock-throwing range	
1515	P.J.	3			total of 3, one of which probably 1504 bird. <u>probably Jaegers (RBC)</u> A larger number of Jaegers were calling than has been previously the case. The call was high pitched and asmatic - a nasal scree. Most of these calls were heard by birds in close proximity to another jaeger.	
1541	Bird sp.	2				
1547	P.J.	2				
1608	P.J.	1	NE	low		
1608	B.F. Booby	1	NE	low	flying just above jaeger; subadult	
1610	W.T. Tropic	1			high over fantail	
F 1616	Sooty Tern	9	Z	to 30'	some immatures	
1630	B.F. Booby	1	NE	low		
1635	Sooty Tern	2	SE	low		
1650	Booby sp	2		low	Either RFB or BFB.	
1658	Leach's Storm Pet	1	SE	low	skipping around on top of water bushes several jaegers and Albatross	
F 1700	Sooty Tern	13	✓	0-30'	mostly adults	
1730	Wedgetail	1		low	light phase; crossed bow 300 yds.	
1734	Sooty Tern	4	↘	30'		
1745	Wedgetail	2				
1800	WT Tropic	1	SE	200'		
1845					Secure	



BFA	3 min	
PJ	6 min	17
Sh	1	1
RFB	9	7
ST	35	7
Tern	11	2
W	4	3
Booby	3	2
Leach's	2	2
Bird	2	31
BFB	1	1
WTT	2	2
	70	24



DATE 5 Jan 1965
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
start watch	0700	B. footed alb.	3			off fantail.	
		white hind	1			1 very large (Laysan or Booby) - all white below regaled by XO before dawn very near ship	
	0710	R. f. Booby	1			at fantail with albatrosses	
	0734	wedgetail	1			light phase	
	0740	Sooty tern	1				
		wedgetail	1			far out	
		dark tern	1				
	0745	Leach Stan B	1			100 yds. off bow	
	752	wedgetail	1			far off	
	0815	wedgetail	1		Low		
F	0826	Sooty Tern	5		0-50 ft		
		Wedgetail	2			innative ^{shot} - down in water, tried pickups, but bird took off	
	0840	R.F.B	1				
	0842	B.F. Albatross	1	@			
	0952	WTTTB	1	Q		Another seen later	
	1008	wedgetail	3			off starboard	
F	1010	Sooty tern	1				
		Blauy tern	1			off starboard	
		Red foot Booby	1				
F	1012	Sooty tern	31+				
		Sooty tern	2			flew across bow 100-150 yd.	
		Sooty tern	3			feeding	
		Blauy tern	1				
		Noddy tern	2				
	1015	Noddy tern	1				
	1015	wedgetail	1			close off port	
		still three B. foot albatrosses				with ship	
	1022	sting petrel sp?	1			dr. briefly at distance - black, couldn't see wing	
	1025	Sooty tern	2			met ship, 100 yds. starboard	
	1050	WT	2			on wing	
F	1057	Sooty Tern	15		7-30'	distant	
	1200	wedgetail	1			off bow	

9

1

1



DATE Jan 5, 1965
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	1258	Wedgetail?	2			Atypical flight - stiff bowed flapping, very quick	
	1259	Sooty Tern	1				
	1304	" "	2			within edge of rain squall	
P	1315	" "	7025			} Feeding within rain squall	
		Fairy Tern	1				
		Wedgetail	54?				
	1334	Wedgetail	1				
	1340	WT	1				
	1346	JF Petrel	1				
	1355	JFP	1				
		WT	1				
	1355	Leach's?	1			white rump not seen but size and flight plus probability indicate this species very likely	
	1359	WT	2			both young birds	
	1402	JFP	1				
	1405	WT	3			at least one older bird - age of these not known	
	1425	WT	1			young bird	
FF	1430	Sooty Tern	15			edge of squall	
		WT	59	6			
	1442	WT	1			1st bird	
	1445	WT	1				
	1446	BFA	1			Chy says hasn't seen one for some time	
	1450	WT	1				
	1457	Shear sp	1			Dark (brown) above, white belly, mostly dark underwings; flight not WT - not probability	
	1500	WT	1				
	1511	WT	1			1504 - Shark seen, probably Hammerhead	
	1519	SFA sp.	1				
	1545	Wedgetail	1				
	1554	"	1				
	1601	Wedgetail	1				
	1604	Shear-Petrel	1			Possibly a Newell's, rapid wing beats fast flight	
	1625	Wedgetail	2				
	1629	Guam Petrel	1				
	1635	Wedgetail	1				
	1700	White-neck petrel	1			100+ yds. across low - nearly entire head white	
	1705	Wedgetail	1			far out	
	1721	Leach's p	1				
				1315			



DATE Jan. 5
Pg. # Pg 3

time	species	#	dir.	hgt.	remarks	loc.
1736	WT	1				
1740	BFB	1				
1741	Leaches	1			—apparently adult	
1801	WT	1				
1802	RFB	2				
1805	Leaches	1			Both birds were immatures with brown upperparts dusky tails and a dusky brown band across the chest. Both circled the boat with apparent intent to land. One initially attempted to land on the mast above the bird bath but was apparently scared off by the well spread indicator. This bird finally landed on the antennae wire on the stern most mast, walked back to look at the bird which spent most of its time preening. Scratched under the wing.	
1810	RFB	3			Imm.	
1820	BFB	1			Ad.	
1821	RFB	3			Imm (same as above)	
	BFB	1			Imm/Sub flying with 3 RFB	
1829	WT	1				
1830	Sooty T	1			Fly and over of boat + call — peak-peak (not wale-awake call) adult.	
1840	observed circled					

14
133
93
240
241

	9	6
RFB	1	7
W	4	50
SI	15	2
SH	3	1
LSP	5	5
BFA	5	2
WTT	2	2
FT	5	3
GBT	2	1
CN	3	2
S-P	2	2
JFP	4	4
SMP	2	2
WNP	1	1
BFB	3	3
	245	63



DATE Jan. 6
Pg. # Pg. 1

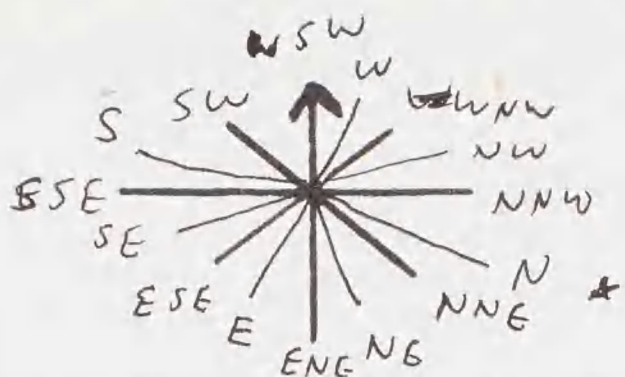
time	species	#	dir.	hgt.	remarks	loc.
0714	Before sunrise	-			BFA + RFB-Imm, off fantail	
0720	Sunrise					
0725	WT	1			following ship	
0734	Bird sp	1			high against clouds - moderate wing beat,	
0741	WT	1			medium size.	
0742	Shear/Pet	1				
0754	Laysan A.	1				
0815	RFB	1			Imm with faint breast band	
0816					Circled ship + shot by Ely at 8:16 - flew as ship approached	
0824	RFB	1			Sitting on top of main mast (Imm)	
0829	RFB	1			In wake of ship. (Imm)	
0847	JFP	1			Ely thinks it's a WNP	
0854	BFA	1			Possibly different bird.	
0940	RFB	1	Z	low	Back + forth across stern with BFA - apparently the one which was shot at leaving the camera mast 0900 - foot dangling collected - DH	
1010	RTTB	1	⊙	120'		
1030					Resume course	
1100	Green-backed Petrel	1			far off starboard	
1257	wedge-tail	1			close off starboard	
1350	JFP	1		low		
1410	Shear-Petrel	1		0-20 ft	far off	
1600	Mashed Booby	1			adult. 3-400' off starboard flying toward stern but	
1630	wedgetail	3	circling low of ship		11. flying low, flapping + sailing, then raised considerably	
1638	hatched storm Petrel	1	low		higher, looked + dove. This repeated twice - the 2nd time bird remained on the water 10 sec. Seard - a few to 30 seconds, dove under water 4-5 sec.	
1650	wedgetail	2		far off		
1740	WTTTB	1	⊙			

an Albatross is back?

X Ray Time

Total - 25/22

W	8/5
Bird	1/1
S-P	2/2
LA	1/1
RFB	4/4
JFP	3/2
BFA	3/3 ?
RTT	1/1
BFB	1/1
LSP	1/1
WTT	1/1



DATE 7 Jan 1964
Pg. # 1

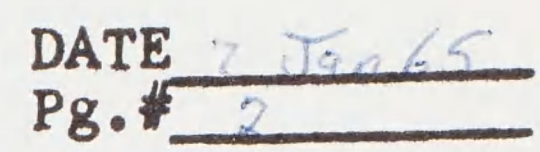
at 0030 was called to bridge to see flock of birds. Large number of ad. Sooty terns calling loudly and flying very near ship. - Said to have been present from 0000 to 0130.

time species # dir. hgt. remarks loc.

0700	Juan Fernandez A.	1		low	300-400 yds. off bow.	
710	und. bird	1			off fantail by X0	
0751	Juan Fernandez	1	WSW	low	500 yds off stb	
0830	White Neck	1	WSW	low	{ initially together heading aft, then split; 400 yds?	
	Juan Fernandez	1	ENE	to 30'		
0846	Shear-Pet	1	WSW	low	Distant; possibly Juan Fernandez	
0930	" "	1	W	low	all dark? glimpsed only	
1025	Heralds P.?	1			brown above, wings white below but darker alonger borders, belly light; throat darker	
1100	Sooty Tern	2	longways	off w NW	<p><u>Phoenix out Kermadec out</u> Size "Wedgetail but heavier body, more chunky; flight gradual banks with occasional more Christmas Island like flapping</p> <p>Heralds P? Stayed low over water little or no wind - sea calm with slight swell - Tollage for Herald's too much white on under wing?</p>	
1200	BP. H. albatross	1			off fantail - very uniform dark brown bird with no white on upper tail coverts. Looks like bird which followed us yesterday.	
1230	Wedgetail	4			Flying, then all sat together, 100 yds off stb	
1235	Phoenix Is. Tahiti	1	ESE	low	Across bow 100 yds out; head, throat all dark, sharp line across upper breast; underwings all dark or perhaps with few white feathers (Heralds only other possibility) - more likely light shining through; fast flight, "loose" flapping. <i>with white</i>	
1420	white-t. b.	2	ESE	100'	2 called, 1 flew past past ship; 2nd dove after it & was then lost to sight. 1st disappeared astern	
1440	Leach's Storm Petrel	1	WSW	low	white wing seen - 200 yds off bow	
1530	Frigate	2	WSW	ENE		
1615	Wedgetail	1	S	low		
1645	Frigate	2	⊙			
1650	RTTB	1				

JFP	3	3
Bird	1	1
WNP	1	1
S-D	2	2
HP	1	1
ST	2	1
BFA	1	1
W	5	2
PIP	1	1
WTT	2	1
LSP	1	1
F	4	2
RTT	1	1

25/18



time	species	#	dir.	hgt.	remarks	loc.
1654	Wedgetail	2		low		
1725	Red f. Booby	2	W	low	1 ad., 1 imm. flying very close together, low over H ₂ O	
1800	Sunset					

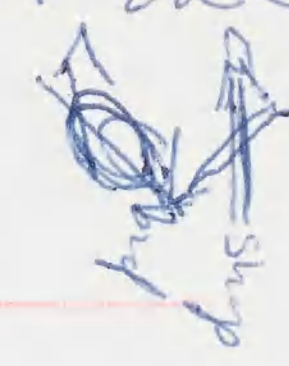


DATE Jan 2-8, 1965
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
1915	Sooty Tern	1				
1918					turn, by Johnston	
1920	Sooty T.	3			calling two Johnston	
1926	"	5 ±			two Johnston	
1930	"	5 ±			Scattered	
1945	"	1				
1950	"	1				
1955	"	1				
1958	"	1				
2002	"	1			All calling, all toward Johnston	
2008	"	1				
2012	"	1				
2020	"	2				
2021	"	1			1, possibly 3-4	
2050	"	1-2			Same bird?	
2051	"	1-2			apparently different than above	
2055	"	1				
1:50		1				
1004	Sooty Tern				low over water	
1008	ST				"squel"	
1026					approximate moonset	
1035	ST				"kek-kek"	
1050	Bul sp				few over heli deck slats not seen well - Tern sp.	
1100	Sooty Tern				2 flying over ca 100 ft. 2 flying over about 100 ft seen - Cals - on high shed squel + are quite indane fly at 1/2 ft eyes to Johnston	
1103	ST	3			arm down under pb cage - 2 of it, 1 found at last 3 very much	

226

2300

1100	Sooty Tern	2-3	underwater + squids
1120	ST	3	mm - one seen at level of ^{bird bath} hull bath
1130	ST	2	mostly K-k + K-k-K-k - a few underwater calls - several more heard below ship to 5-10 feet?
1140	ST	1	K-k - K-k
1145	ST	1	mostly K-k's 1 squid + 3 underwater
1155	ST	2-3	underwater & squids
1205	Sooty T	1	underwater -
1207	ST	2	mm - hehe + underwater + squids
1217	ST	4-5	mm - underwater
1230	ST	2	mm
1241	ST	1	seen at about 10-15 feet over level of bed bath
1247	ST	1	WA 
0115	ST	1	
0127	Sooty Tern	3	calling loudly, between Hilo deck and Bed Bath
0132	Sooty Tern Bird up	2+	parallel ship calling, other bird sounded like a Booby?
0144	Sooty Tern	2	flying beside Hilo deck
0155	Sooty Tern	4+	flying in 2 groups off Port side calling now 1 group
0203	White Birds Sooty Tern	2	near beside ship STB side, then over Hilo deck, Sooty Tern calling, 2 white birds may have been Fairy Terns? about night size
0215	Sooty Tern	1	Heard off STB
0230	Sooty Tern	3	circled ship
		39	
		(+3)	



DATE Jan 7-8, 1965
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
0238	Sooty Tern	2			calling off Bow	
0247	Sooty Tern	2			calling above 7th deck, all dark bird flew between Bird Bath and 7th deck	
	Bird sp					
0255	Sooty Tern	2			calling off bow	
0305	Sooty Tern	1			flew from stern to bow then on	
0315	Sooty Tern	1			calling off STB side	
0324	Sooty Tern	1			Heard calling off PT. side	
0339	Sooty Tern	1			Heard calling off PT. side	
0355	Sooty Tern	2			Heard calling a long distance off STB side	
0359	Sooty Tern	3+			calling off STB side	
0420	Sooty Tern	2+			heard calling near ship	
0445	Sooty Tern	1			calling over ship	
455	Sooty Tern	3+			at least small flock; eggs came from rear of ship	
0500	Sooty Tern	2+			several over ship from stern	
0630					secure night watch	
		23				
		39				
		35				
		97				

check



DATE 8 Jan. 1965
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0630					begin daily watch	Course 168
0647	shear-petrel	1	NW	low	for out, just at horizon	Coz
0930	JFP	1	WSW			
1046	JFP	1	E			
1310	Leach's storm P	1	ESE			
1350	WTTA	1	@			
1615	JFP	1	SSE			
1615	Shear-Pet	1	E		Wedgetail flight ? possibly same JFP	
1625	BFB	1	↗	70'	Ad.	
1647	Booby	1	-		RF or BF - on water, 300 yds off stb	
1717	Wedgetail	1		low		
1725	End Observations					

JFP 3/3
LSP 1
WTT 1
S-P 1
BFB 1
Booby 1
W 1
9/9



DATE Jan 9, 1965
Pg. #

time species # dir. hgt. remarks loc.

015
0630
begin observations
approximate sunrise

0737 RTTB 1 ↓ high

0745 Spinner Porpoise?

1055 RTTB 1 ⊙ high

1245 Masked Booby (Obs. free) 1 W 50-100' flew in far forward - sailed + flapped along ship, made at least one shallow dive. did not come within gun range

Booby 1 S high

1415 RFB 1 immature made 1 dive into water

1535 Frigates 2 ♂ high playing around

1740 RTTB 1 E 150'

1815 Sunset - secure

0648-0748
0748-0848
0848-0949



DATE Jan 10, 1965
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0645					Sunrise - begin observations	
0650	BFB	1	N	60'	From behind	
0710					Whale off port - distant, only spout seen	
0735	Booby	1	X	to 50'	R for BF - dove 3 times - distant, ahead	
0755					Whale ahead off stb - spout visible	
0815	BFB	1			Following ship - probably the same one	
1245	Wedgetail	1	NNE	low		
1330					Whale spout seen.	
1430					2 whale seen - spout also visible	
1530					1 whale seen - " " "	
1610	Frigate	1	20	high	♂	

Turn at 1530

0647 0747
0747 0847
0847 0947



Half moon

DATE Jan 10 1965
Pg. # 1

time species # dir. hgt. remarks loc.

2200					Begin night watch - 3 Sooty Terns heard between 930 + 1000	
2202	Sooty Tern	1-3	SW		Calls separated but perhaps one bird	
2212	"	1	?		Single wideawake call ahead	
2215	"	1	N-NE			
2216	"	1-4			Several two syllable calls constant distance ahead & 1 closer	
2218	"	5+			Scattered, most 2 syll.	
2225		1-2			off port, distant	
2226		2?			Ahead, distant	
2230		1	NE			
2231		1			Single call (2 syll of wideawake)	
2242		1				
2245		1			High over ship - single syllable call	
2246		2?	NW?		Single syllables	
1146		2	N?		Two syllable	
2250		4+			N.D. perhaps up to 10 or 20 - scattered calls, whole repertoire of calls; mostly off stb, high, none visible - flock, stream?	
2253		3+ 6+			Seemed to come from ahead, port, and so past & circle - also possibly more coming from ahead	
2258		NE 25-30?			Broad front ahead; all calls; most of distant calls abbreviated wideawake - nearer ship, quick one syllable yip-yip. Can't tell if birds flying past in one direction or circling	
2308					Continuous steady volume of calls ahead of ship and on past on stb - birds calling in response to ship? ship lighted by moonlight on these sides only.	



DATE Jan 10 1965
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
2312	Sooty Tern	1	E		No calls since last - 19 group, spread out	
2314		1	SW		wideawake + yep-yep - over ship	
2315		2-3	E			
2320					constant series of distant calls since last	
2324		1			single call off port; no calls since last	
2325		3-4	NE			
2327		?	SE?		Numerous calls ahead	
2328		42	?			
0010					Break	
0010	Sooty Tern	1			Ahead	
0012		1			off stern - wideawake	
0015		2-3			off old	
0016		1	NE		off port	
0028		2-3	SW			
0031		1				
0036		1				
0047		2-3			Scattered	
0052		1	E			
0101	ST	1			off bow	
0126	ST	1			from port bow toward stern	
0155	ST	1			distant astern (weak call)	
0203	ST	5+			from bow astern close - saw 1 in light of horizon	
0209	ST	1			circle or 2nd group farther out	
0235	ST	1+			close along port - bow to stern wideawake	
0240	ST	2+			from fantail - off starboard	
0245	ST	1			off starboard + high over helideck	
0250	ST	1			off stern - bow to stern - w + soft calls	
0256	ST	1			head for port, crossed in front of ship - distant	
0314	ST	1			from stern to bow calling	
0323	ST	1			bow to stern	
0335	ST	2+			some distance off starboard (4 call only)	
0358	ST	1			astern - port to starboard	
					irregular flight - bow to stern then return	
					fast calls lead ahead	



night

DATE 10-11 Jan.

Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
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0415	ST	1			heard but not seen	
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0425	ST	1				
------	----	---	--	--	--	--

0455	ST	1				
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0547	Tropicbird	1			Sitting on water	
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Jan 11 - 12

0422	ST	1	-	WA	one ship by
0431	ST	1	-	fast	all all
				bow	



time	species	#	dir.	hgt.	remarks	loc.
0630					Sunrise	
0834	BFB	1	E	low	Ad.	
0850	JFP	1	W	low		
0935	Shear-Pet	1	N	low	very distant, white below	
1117	JFP	1	SW	low		
1200					Course change - shot by.	
1340	Bird sp	1	NE	high	Tropic bird or booby - reported by crew	
1700	Turn made					
1730	Turning again for switching?					
1810	Wedge-tail	1	SW		flew in fast ¹⁵⁰ 100 yds. starboard	
Sunset - day watch ceased; night watch begun						
2028	ST	1			from port bow toward stern	
2120	Red foot	1			adult scored length of ship from pilot house low over helo deck & went to land on standard at bow. Not over 50 ft from deck - several landings then flew forward of bow and dipped down and was seen momentarily against dark water. With moonlight & ship's light had good look at bird including white tail.	
2135					light squabble	
1117					apparently in Sooty level at quite some distance! Not definitely head -	
0105	ST	1				
0120	ST	1				
0231	ST	2				
0245	ST	4+			coasting ship	
0310	ST	1				
0325	ST	1				
0335	ST	1				
0345	ST	2				
0410					Resume watch	
0420	ST	2	ND		off port	

just 10 min sunset

0652-0732





12 Jan

DATE Jan 11-12
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0422	ST	1	SW	NW	Wideawake over ship, high	
0431		1			faint call off star bow - 2 syll	
0640	ST JFP	1	NW		Got off water off port bow	
0655					Sunrise	
0715	R.t. Tropic	1	NE		200 yds off star	
0725					Whale - long-lasting spout	
0730	Tropic (RT)	1			on water 200 yds off port	
0924	Wedgetail	1	S			
0934	RFB	1	W	low	Imm? - white tail	
11 ⁵⁰ 1145	Masked Booby	1	NW	100'	first seen astern, flew up along port at 100-150' flapping steadily. Dive from this height, was under 4 sec, then literally pugged to the surface, paddled + took off. Regained altitude and flapped slowly to the NW. Coe	
1200	searching for fish ball.				began turn Masked Booby returned + circled in area for at least 15-20 min. - made 1 pass at 100 yds from starboard just	
1250			NE		picked up fish ball!! of time fishing in area, (barnacles + crabs)	
1310	R.T.T. bird	1	high		high over ship.	
1515					turned NW - 3/2	
1600	RFB	1	⊙		immature	
1610	B.F.A. Whitehead	1	⊙			
1655	Wedgetail	1	E			
1705	Wedgetail	1	sitting on water			
1800	R.f. booby	3	NW	low	1 ad., leading, + 2 imm. - from S. past ship to about NW - 200-300 yds out	
Sunset					about 18 00 ¹⁵	albatross following at 1800 but not seen at 1815.



DATE Jan 12-13
Pg. #1

time	species	#	dir.	hgt.	remarks	loc.
1930					turn to SW	
1945	ST	2-3	E		WA + yip calls	
2016		1	NE		WA + scream	
2030		1			Single WA off port stern	
2100	RTT	1	SW		Got off water 20' off stb, with a squawk	
2105	ST	3	NE		along stb	
2110	"	2-3	E		distant	
2115	"	1-2	NE		far off stb WA	
2120		1-2	NE		WA	
2121		2	NE		separated WA	
2131		1	E			
2132		2	E-NE			
2135		2-3	NE		off stb stern	
2136		5-6 6-10			Seem to remain about same rel positions - perhaps many screaming port, distant	
2142		1	NE		close off port - WA	
2145		1-3			separated calls	
2150		3-4			" ; 1 over ship	
2151		3			"	
2209	ST	1			walrus to port	
2206		1				
2210		1-2				
2212		3-4			At least 3 WA + 1 yip	
1015		1			heard at some distance but faint	
1016		2-3			Different group to port also at some	
1018		2			distance -	
1022		2			men.	
1024		2-3				
1028		1			heard	
1030		5-10			group flying off the fuel slat	
					likely not as thin fare probably	
		1			10 in line	
1032					unsuble, in usual heavy	
1040		2-3			blew quite near the steps	

1041	1	WA	
1047	1-2	WA	
1050	4-5	small grey but call to them	
1053	1	 could them of nyles? the my birds? they the pined. Pinedly n apart niles but slowly occurrence. 	
1055	3-4		
1100	1		
1115	3-4		
1115-1118		break for coffee etc. back for coffee etc.	
1119	2-3	only for out	
1122	5-10	<p>small grey? see below off to put, Pinedly clasto in on there - Vg long net pinedly less than full. So the can the niles as an amount of niles? slowly occurrence with flicks fly niles full light that for niles 5-8 niles so not put in again - type niles niles of but call my pinedly be greater than the niles about Pinedly as as niles as we can be in niles niles, no less. Heard until a last 1134 about niles. No niles of niles niles the is a niles of niles as we but niles at the niles niles to the ship. That niles niles to niles & pined to the ship. niles but the grey at last 1137 to put niles niles. only the niles niles</p>	
1142	1		
1143	1-2		



DATE Jan 12-13
Pg. #

time	species	#	dir.	hgt.	remarks	head calling at	loc.
1143	5-10				<p>Ambe group heard calling at 1143 group heard directly over ship but of the low from starboard to port it is possible that a large percentage of the birds heard up to this time are heard from essentially all power that descend in the by saluted only period ^{calling} at about 1137 the group heard continuously from 1143 to this appears chiefly in birds ship and at again - ^{calling} called along to 1208 by which the sound never were by heard on the port side.</p> <p>Several heard directly over ship but small heard directly over ship but very high another heard to port moderately low ^{calling} descended to wheel stove at 1207 - Day the period there has been an increasing amount of about one of the men is but ^{could} this probably makes by the clock - Could this be an effect of (Punch) & cleared Clocks appear to be of about noon light and we will for permit much would to show by - perhaps are eggs for of clock -</p> <p>heard to port heard to port starboard starboard</p>		
1200	5-10						
1210		1					
1212		1+2					

Q

1214	1	^{self} port side lgh
1213	1	4 4 illuminer gradually decreasing.
1218	2-3	aligned & ahead
1220	4-5	several small scattered groups heard one as above and possibly the same - One as above & possibly the same - The other apparently about the ship but very high.
1222	4-5	While calls are not as strong, but, as earlier or earlier, they are relatively steady in occurrence and can generally be picked out in quiet periods of listening easily - Port & starboard forward & lgh Clouds heavy down, abt. quite visible down and quite back - Wind probably be called a species of winds except the breeze Mum when we observed the funny Saw still very fast & calm with light gull breeze - Temperature cool but not displeasingly so. At a distance to the north there were some birds present but on the right of five 7-8 but only very much color - Another distance with that report as that the birds generally did not come as nearly as close to the ship as they did that evening (when the feeders were abundantly searching)
1230	1	heard many are to port, under light
1231	2-3	to port at a quite close distance -
1245	2	Dead silence from 1235 to 1245
1248	1	Dead silence from 1235 to 1245 to port to port



Foot mounds in Tupper

DATE Jan 12-13
Pg. #

Rec'd to
at loc.

time species # dir. hgt. remarks

1250 Cloud over shell house - Current
illuminated lent to also put for as
the every.

1255 2-3

0115 ST 1

0133 ST 2

0140 ST 1

0150 ST 1
0200 ST 1

0225 ST 1

0253 moan

0256 ST 1

0332 ST 1

0343 Bird up 1

0345 ST 2

0410 ST 1

0420 ST 1

0445 ST 1
0500 Bird up 1

put, let, & note about - Cloud
one widely being less dense
Appearance of clouds about 1000
they will be at best foggy open
for the next 20-30 minutes or so.

7-8 2-3
8-9 2
9-10 28-38
10-11 34-50
11-12 18-31
12-1 27-38
1-2 5
2-3 3
3-4 2
4-5 4
5-6

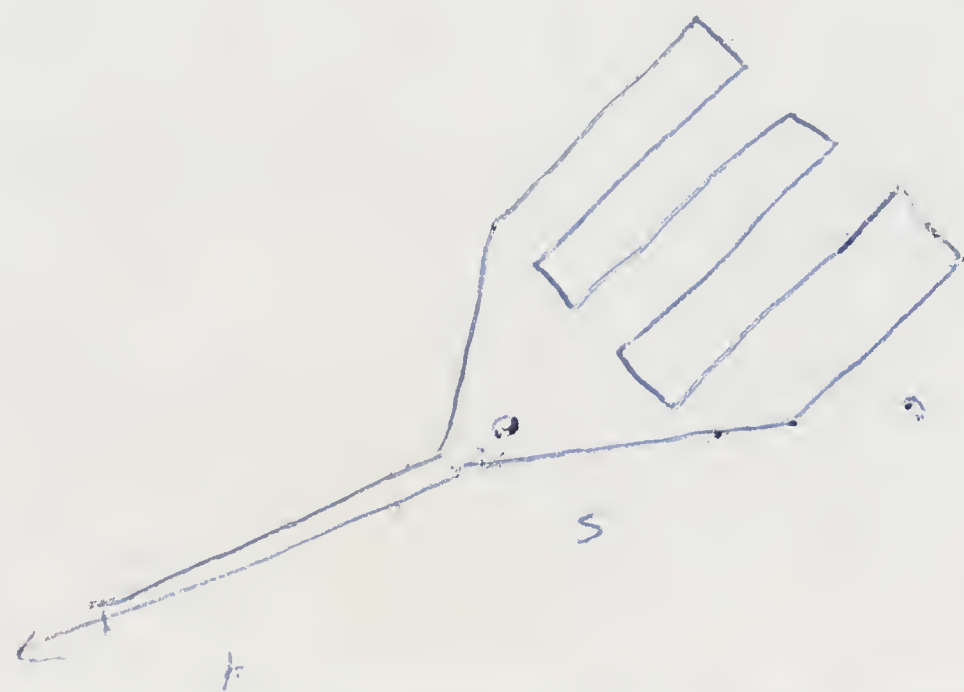


DATE 13 Jan
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
~ 0700					Sunrise	
0734	RTT	1			on water 300 yds off stb	
0750	RFB	1	}	low	Imm RF with at least two other birds. Pterodroma with dark back, too far to see pattern, body light below, ^{under} wings all dark, could not make out head, smaller than wedgetail, very fast flight, much flapping, no banking; departed at ship's approach; could not see head.	
	Pterodroma	1				
	Sh. Pet	1				
					Shear-Pet may have been Wedgetail	
					large fish jumping beneath as well as numerous flying fish	
0804	Shear-Pet	1			Distant	
0815	Shear-Pet Wedgetail	1			Dark phase ^{wedgetail?} - glimpsed at a distance	
0938	RTT	1			on water 20 yds off stb	
0939	RTT	1			flying behind us	
0950	Tropicbird	1			on water, distant	
1255	Pterodroma	1	Z		Uniform dark gray-brown above, white below except dark throat (not as far down as Phoenix type) and dark underwings with white patch (irregular outline) near tip. Slow lazy flight	
1312	RTT	1		100'	Circled stern 2-3 times	
1342	Shear-Pet	1	NE	low	All dark above - close off stb	
1507	RFB	1	SW	low		
1545	Wedgetail	1	SW			
1602	JFF	2	SW	low		
1710	Frigate	2	SE		Playing ground	
1758	JFP	1	N			
~ 1830					Sunset	

Turn 1600

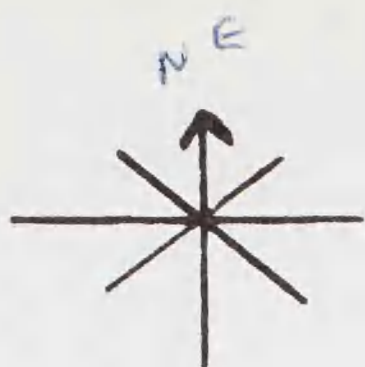
1425







DATE Jun 13-14
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
2005					turn to NE	
2030-2100					fantail - no birds	
15	ST	1			single bird called twice single bird, called twice many in direction of darker area relative to ship's course - 3rd, 4th calls heard about dead ahead	
1150	ST	1			Same as above? Single bird	
1215	ST	1			Circled around on stern & apparently departed on same side	
1245	ST	1			to put a mel. lsh	
0225	ST	1				
0239	ST	1			long ways off	
0310	ST	1				
0410	ST				no more	
No birds seen or heard on 0410 - 0700 watch						



DATE Jan 14
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0840					turn to 045	
1230	Puffinus sp.	1	SE		All dark, appeared larger than Wedgetail and straighter-winged. Slow gliding, no flapping. D P Wedgetail, slender bill, pale foot? Much banking, not typical of Wedgetail	
1347	Sh-petrel	1			All dark - seen at long range and suddenly disappearing as calm upon which it presumably sat down. Seemed chunky with narrow wings but at great range flapped and banked steeply but close to surface of water - As above?	
1430	J. P. Petrel	1	V		Came in to within 80-100 yds. of port.	
1705					Whale or porpoise - surfaced 30' off pt  No report	
1750	RFB	1	SW	low	Imm 500 yds off port	
1815					Sunset	





DATE 14 Jan Night
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
1000	0853	ST	1	SW?		appeared to be flying toward rear of ship - call	underwater
	0902	ST	1	?		moonlight but cloudy over 60-70% of sky heard 1 underwater call off port stern.	
2100	0907	ST + 1?				heard several calls off port - 1 was quite different. but was not repeated. Birds (incl. 1 Sooty) were either far off or calling faintly.	
	0910	ST	1?			brief calls off starboard. direction? moonlight - 50% cover overhead	
	0927	change in course				from 090 to 045°	
	0935	ST	1	?		underwater call close off star port - moonlight through broken clouds.	
	0958	ST	1	ENE		wind gusty - difficult to hear calls when blowing. from stern forward - sev. good underwater calls	
2200	1015	ST	1				
	1125	ST	1			stern put	
	1137	ST	1			curly near edge of ship	
	1150	ST	1			distal	
	1153	ST	1			beh overhead	
2300	1106	ST	1			put distal	
	1150	ST	1			put + hkn	
	1205	—	1	N		veh hkn "hh" (subsequently)	
	1210	ST	1			off? or not?	
	0155	ST	1			Single call far off port	
	0212		1	W			
	0330		1			off port	
	050					moonset	
	0515					Johnston lights dull glow on horizon	
	0530					Top antenna light on horizon	



140

DATE June 15
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
W	0700					Sunrise - Johnston ~ 20 miles ahead	
	0719	RFB	1	W		low 54	
	0724	RFB	4	W		2A, 2I	
	0730	Booby sp.	4	W		2A, 2I	
		Booby sp.	4	W		2A, 2I	
F		Bridg.	6+			First seen 2 mi. +, looked like boobies	
F		Sooty Tern	5+	SW		Far beyond above group.	
		Ferns	6-10 (8)			Collected - DH odd	
	0745	BFB	1				
	0823	BFA	1			Seen with Johnson on sight on the horizon Following while maneuvering to pick up BFB; collected from VP	
	0830	Frigate Tern	1 1	SW		Horizon Begin compass maneuvers	
	0832	Brown Booby	1				
F	0945	RF Booby	8-12			1-2 imm. 1 1/2 - 2 mi from ship. Could not distinguish between RF + BF beyond 700 yds when held up in VP but this against background of people, not water. Could easily distinguish Boobies beyond 1 mi, at which time flock in view 1 1/2 - 2 times as far. Probably can see ad. BF + RF at 3 mi., imm. at 1 1/2. From size + showiness of white, sooty terns at 1 1/2 - 2 mi or greater; so for light bodied shearwater-petrels. Very calm, clear, opposite sun.	
	1009	Sooty Tern	2			3/4 mi est - 1 mi - 1 1/4 by radar on VP	
	1018	BFB	1			ad	
	1018	RFB	1			imm - sitting on water	
	1021	BF	1			on horizon 1 1/2 - 2 mi	
	1024	Booby sp.	1			RF or BF 1 mi	
	1100	Laughing? Gull	1			collected - RBC	
	1208	Whale				off starboard	
	1250	RFB	2	SE			
	1305	RFB	1	SE			
	1310	RFB	1				
FF		RFB	4	SE		held SE, seen to be joining other Boobies in somewhat of a feeding flock	
	1330	RTTB	9	high			



DATE 15 Jan 75
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
F	1335	RFB	15			sitting on water, 6 immatures	
		BFB	3				
FF	1337	Sooty Tern	20			feeding	
		RFB	8			3 immatures	
	1505	R. F. Booby	4	on H ₂ O		sitting in loose flock - about 100 yds apart. - 300-400 yds. off starboard.	
F	1520	R. F. Booby	10	on H ₂ O		loose flock of 8 and 2 nearby. 8 ovs. + 2 imm.	
	1530	RFB	1	SE		(6 ad. 2 imm)	
	1555	RFB	1	NW	low		
	1616	RFB	2		low		
F	1618	RFB	2			immature	
		Booby sp	4				
	1646	RFB	2	SW			
	1655	RFB	4	S			
	1658	RFB	1	SA			
	1720	RFB	1	S		whale also seen	
	1723	Sooty Tern	4	S			
	1724	RFB	1			Wing up	
	1727	RFB	3	low		3 ovs.	
	1738	Sooty Tern	1		low	sat on floating carton 250 yds off port	
		GB					
	1756	RFB	1			Across Helo Deck	
			93				
			47				
			40				

RFB 77/22
ST 36/4
Tern 9/2
BFB 6/4
BFA 1/1
F 2/2
BB 1/1
Gull sp 1/1
Booby 5/2
RTT 1/1
GBT 1/1
140/36

Ad	Imm	?	SA
### ### ###	### ### ###	### ### ###	###
33	19	19	1
### ### ###	### ### ###	### ### ###	###
36	19	21	1

1816 55

all



DATE Jan 15-16
Pg. # 1
Night



time	species	#	dir.	hgt.	remarks	loc.
1924	Sooty Tern	1	SW		off port	
1934	" "	1			over ship	
1935	" "	1	EZ		Behind, then to rear from ahead	
1936	" "	1	SW		From ahead	
1940	" "	2-3	SW		from ahead	
1952	" "	2				
2020	" "	1				
2022	" "	1				
2028	" "	1				
2040	" "	1				
2042	" "	1	W			
2045	" "	1				
2055	" "	1				
2115	" "	2			Either side	
2118	" "	1				
2145	" "	1				
2150	" "	2-3	SW			
2158	" "	1				
2245	" "	1			high & overhead	
2300	" "	1				
2311	" "	1				
2314	" "	2			one forward, one port.	
2322	" "	1				
2350	" "	1				
2404	" "	1				
2415	" "	2				
0155	ST	1			NE - stern to bow (underwater).	
0300					full moon - sky 80% open	
0410	ST	1			moon hidden - about 80% overcast	

all



DATE 16 Jan
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0644	Sunrise					
0740	B.F. Albatross	1			following ship not seen after 930	
F.F. 1107	Sooty Tern	8			whole flock 1100	
	Frigate	1			Above Sooty's	
1210	RFB	2	2m		collected 1	
1215	Sooty Tern	1				
	Wedgetail	1				
1430	Sooty Tern	3				
1530	Red-footed Booby	1	2m		col.	
1740	Sunrise					

1746-1750



DATE Jan 16-17
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	2050	Sooty Tern	1			W behind	
	2055	Sooty Tern	1			Yip-yip high above	
	2124	" "	1				
	2136	" "	2	↖			
	2237	ST	1				
	2325	ST	1			? call but hke - forward & to put	
	2333	ST	1-2			Direct ↘	
23	241	ST	1				
23	252	ST	1				
	1208	ST	1-2				
	0237	ST	2+			2 circling ship, probably another out further	
	0300	Albatross	1			following ship	
	0545	ST	1				
	0600	Shear-Petrel	2			flying across moonlight water.	
	0603	S/P	1			large petrel or shearwater	
	0625	Shear-Petrel	1				
	0650	BFA Albatross	1	⊙			
	0720	BFA Albatross	1			total of 3 now	
	0758	BFA	1			total of 4	
Set Time	0803	Wedgetail	1	ENE	low		
Back 1 hr	0808	Sooty Tern	17			Travelling -	
		Shear-Petrel	3			probably wedge-tails	
	0815	BFA	1			5 Total	
	0830	Wedgetail	2	~	low		
	0850	Frigate ♂	1	⊙	high		
	0915	Black-winged Cook's Petrel	1	⊙	low		
	0918	Frigates ♀	2	⊙	high		
	0925	BFA	1	~		6 Total	
FF	0935	Sooty Tern	35			feeding, low in water	
		Fairy Tern	3				
		Wedgetail	10				
		Shear-Petrel	10				
	0940	WNP	1	⊙	low		
	1000	BFA	2			total	





DATE 17 Jan 65
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1124	GF	1	SW	60'	♂	
1320	Leach's	1	NW		Feeding? Dabbling along water at several pts	
1325	Sooty Tern	1	E	10'		
1328	" "	1	SE			
1328	" "	1	SE			
1405	Leach's	1	W			
1445	whale sp	3			3 looked closely	
1450	whale sp	4			1 long black, others with greyish green stripes on backs, about 300 yds off	
1708	Sooty Tern	3	SW			BFA
1805	" "	1	SE			8-10 at once
1829	RFB	1			subad. white phase	↓ 4 ↓ 6 + 2 ↓ 8 + 2 ↓ 4 ↓ 3 ↓ 1 ↓ 4 + 3 ↓ 6 + 2 ↓ 8 + 2 ↓ 2 ↓ ↓ + 8 10
1830	Sunset				NIGHT WATCH	
		97				
					W 13/3 ST 59/7 S-P 13/2 F 4/3 CP 1/1 FT 3/1 WNP 1/1 LSP 2/2 RFB 1/1	10-30/7
					97/17	
					SPA -	
					T - 62/7	
					59 237 296	



NG

DATE Jan 18
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	0857	Sooty Tern	1	N	low		
	0857	Leach's	1	E			
	0901	Fairy Tern	1	SW	30'		
	0915	Wedgetail	1	NW			
	0926	Sooty Tern	2	SE			
	0940	Shear. Petrel	1			small (about Bulwer's size) all dark, flying like a petrel in a hurry	
	0947	Tern sp.	1	SW	low	Resembled Gray-back but Dayle says not quite - not enough contrast between wings + back, cap not seen. Common?	
	0947	Laysan Alb.	1				
F	0953	Great Frigate	1				
		Fairy Tern	2				
		Sooty Tern	8			not feeding. Later approached ship.	
		Noddy	1				
		Wedgetail	2				
	0958	Red-foot. Booby	1	N	low	ad.	
	1000	Shear-pet.	1			far out.	
	1014	Wedgetail	1	N		off fantail	
	1034	Wedgetail	1				
	1034	Laysan albatross	1			around ship left about 1050	
	1034	Leach's petrel	1	E		sev. hundred yds off stbd.	
	1115	Sooty Tern	1				
F	1125	Sooty Tern	54+			50+ immatures	
		Common Noddy	6+			staying low to water	
		Fairy Tern	3				
	1153	Laysan Alb.	2	SE?		1 3/4 mi off port - came in until 1235	
	1155	Fairy Tern	1	NE			
	1200	Sooty Tern	1	NW			
	1206	" "	2	NW			
	1228	Leach's	1	?			
	1258	Wedgetail	1	SE		Got off water	
	1303	Sooty Tern	2	NW			
	1316	" "	3	S			
	1327	" "	1				
	1327	Shear-Pet	1	NE			
	1330	Sooty Tern	3	NW			
	1338	" "	1	NW			
	1338	Fairy Tern	1	SW			
F	1340	Sooty Tern	6	NW			

	S	13	85
ST	13	3	
-LSP	3	8	
-FT	5	6	
-WT	5	3	
-S/P	3	1	
VTog	1	4	
-LA	3	1	
GF	1	9	
INT	2	1	
VR+B	1		
		121	



(16)

DATE Jan 18 - 1965
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1342	Sooty Tern	1	NW	low		
1345	Laysan Alb.	1			following	
1352	Fairy Tern	1	⊙			
1352	" "	1	NW	50'		
1403	Booby? sp.	1			on water 1/2 mi +; possibly object	
1419	Sooty Tern	1	⊙			
1435	Leach's Storm Pet.	1	NE	low		
1502	ST	2			Tunnell	
1513	Sooty Tern	2	NW			
1535	RFB	1	SS	Low		
F 1550	Sooty Tern	35+	SE			
	Fairy Tern	3				
1555	Laysan Albatross	1	⊙			
1556	Sooty Tern	1				
	Fairy Tern	1				
1638	ST	2			1640 RFB - 2 - SW	
1640	ST	1				
1702	ST	2				
1705					45° degree in	
1710	Jacquer	2			dark + light -	
1712	Pan Jage	4			on water	
X 1719	PJ	4			at least 6 PJ chasing a single ST	
	ST	1			assiduously.	
1720	ST	1	W			
1721	ST	4				
1721	small black bird	1			being chased by 4 jacquers.	
F 1730	Sooty Tern	6				
F 1740	Sooty Tern	12				
F 1741	Sooty Tern	7				
at this time max. 12 albatross						
Total 321/67						
44						
85						
78						
207						
91						
121						
109						
1832						
BFA - 12/1						
LA - 6/5						
ST - 207/35						
FT - 29/13						
NT - 11/3						
Tern - 1/1						
F - 1/1						
RFB - 4/3						
Booby - 1/1						
W - 7/6						
WNP - 1/1						
JFP - 3/1						
Pter - 15/1						
S-P - 9/4						
LSP - 5/5						
RTT - 2/1						
WTT - 1/1						
PJ - 5/1						
Bird - 1/1						
Black-footed						
BFA - 1 12						
ST 15 78						
LA 2 2						
LPT 4 6						
Booby 1 1						
LSP 1 1						
RFB 2 3						
PJ 1 5*						
small bird 1 1						
109						

Sibley

Ely
Humphrey
Sibley
Gould
Wirtz
Amerson
Thompson

AT SEA SURVEY 18 JANUARY 1965

The 18th At Sea Survey was conducted from 4-18 January with four Smithsonian Institution personnel aboard - Charles Ely (Biologist in Charge), Kenneth Amerson, Roger Clapp and Dayle Husted. Observations were made during all daylight hours both en route to and from the Grid and within the Grid proper. Nocturnal observations were made for nine nights including areas both inside and outside the Grid.

The trip plan was modified in several ways from previous cruises. Details are presented in the Trip Report. The usual two man, two hour watch was used at the beginning of the cruise but so few birds were recorded that less formal watches were maintained for the remainder of the trip. At least one man was constantly on watch. Nocturnal observations were made with one man, three hour watches. No oceanographers were aboard and no BT casts were taken. The Field Party members prepared about 80 birds left frozen from previous trips - 56 were stuffed before supplies were exhausted. Cooperation from the ship was very good; shooting was rarely restricted; and the whaleboat was lowered for three hours near Johnston Island for collecting and distance measurement experiments.

Six and one half days were spent within the Grid; eight and one half days en route (Table 1). Diurnal observations were conducted for a total of 75 hours (150 man hours) and 688 linear miles within the Grid and a total of 92.8 hours (185.6 man hours) and 763 linear miles outside the Grid. Nocturnal observations totalled 50.9 hours and 466 miles inside the Grid and 60.3 hours and 555 miles outside the Grid. Additional details of mileage and time logged are in Tables 1 and 2.

A total of 1021 birds was recorded - 959 outside the Grid and 62 inside the Grid. In both cases this is a drastic drop from the December numbers (1932, 1451 and 481 respectively). This decrease was much greater than last year and produced a new low density for the Grid area. Twenty species were recorded with 11 occurring only outside the Grid (Laysan Albatross, Phoenix Island Petrel, White-necked Petrel, Cook Petrel, Pomarine Jaeger, Laughing (?) Gull, Common Noddy, Brown Booby, Fairy Tern, Sooty Tern and Gray-backed Tern). Seven birds of four species were collected.

An average of 7 species was observed per day (8.7 outside grid; 4.3 inside grid). This was a drop inside the Grid and an increase outside the Grid as compared to December.

Weather was very mild especially inside the Grid. Overcast conditions and rain squalls were rare. Sea conditions were mild and waves were two feet or less on all but a few occasions. Swells were often deep, especially during the return from Johnston Atoll. Several days were calm and almost glassy except for swells. At such times the water surface was gently rippled and with extensive slicks between the swells.

The effects of these weather conditions on bird numbers is unknown but they may have been significant. It seemed however, that on this cruise no more birds were seen during the windy than during the calm periods. Boobies were observed sitting on the water in small flocks during one very calm period. No storm petrels were observed at any of the slicks.

Visibility was always good (8 mile minimum) and usually excellent (10 or more). On calm days it was possible to distinguish details of cloud formations as they appeared above the horizon. Small floating objects and birds could be seen at a great distance.

Annotated List

Black-footed Albatross

(An overall increase from December of from 18 to 26 birds)

Grid: Decrease of 1: 1 followed the ship briefly 85-95 mi. SW of Johnston Atoll.

Non-Grid: Increase of 10: Albatross numbers are difficult to ascertain therefore the maximum seen at any one time for each day was used. Birds were progressively more numerous near Oahu and irregular more than 300 miles from Oahu. In general, near Oahu maximum numbers were recorded near dusk but away from Oahu birds were most frequently seen in early morning. Birds were sighted from near Oahu to 19 mi. NNW Johnston Atoll (one collected).

Laysan Albatross

(An overall increase from December of from 3 to 7 birds (6 sightings).

Grid: Not recorded.

Non-Grid: increase of 4 over December. One was recorded about 360 mi. ENE Johnston Atoll; the remainder from 35 to 95 miles SW Oahu.

Wedge-tailed Shearwater

(An overall decrease from December of from 423 to 97 birds (58 sightings).

Grid: decrease of 232. Seven single birds (all light phase birds) were observed at widely scattered localities.

Non-Grid: decrease of 94; fifty one sightings representing 90 individuals were logged. Observations were widely scattered with a few birds within 50 miles of Pearl Harbor and within 85 miles of Johnston Atoll. The only concentration of sightings was between 180 and 260 miles SW of Pearl Harbor (50 birds). Only six bird flocks contained wedge-tails (10 birds maximum).

All birds seen were light phase birds and most seen clearly were birds of the year.

Phoenix Island Petrel

(Not recorded in December)

Grid: Not recorded.

Non-Grid: One bird was recorded on 7 January about 84 mi. ENE of Johnston Atoll.

White-necked Petrel

(An increase from December of from 1 to 4 birds).

Grid: Not recorded.

Non-Grid: Four single birds were recorded as follows: 115, 250 and 320 mi. SW Oahu and 110 mi. NE of Johnston Atoll.

Juan Fernandez Petrel

(An overall decrease from December of from 42 to 21 birds (19 sightings).

Grid: Decrease of 17: Seven singles were observed at scattered localities - none within 100 miles of Johnston Atoll.

Non-Grid: Decrease of 6: Most of the 12 birds were alone but occasionally one would be associated with a bird of some other species. Records were well scattered between the Grid and 100 mi. SW of Oahu.

Herald's Petrel

(Not recorded in December)

Grid: Not recorded.

Non-Grid: A bird probably of this species was carefully observed on 7 January about 100 mi. ENE Johnston Atoll.

Cook's Petrel

(Not recorded in December).

Grid: Not recorded.

Non-Grid: One bird, probably this species was observed 17 January about 300 mi. SW Oahu.

Leach's (?) Storm Petrel

(An overall decrease from December of from 42 to 16 birds).

Grid: Decrease of 11: One was seen in the NE corner of the Grid on 8 January.

Non-Grid: Decrease of 17: Most were observed between 40 and 275 mi. SW of Oahu; others were observed at 75 and 250 mi. ENE of Johnston Atoll. Three unidentified storm petrels observed SW of Oahu were probably of this species.

Unidentified Procellariiformes

(14 sightings (25 individuals) could be identified only to the general group Shearwater-petrel.) A number of these were probably wedge-tails. All of these unidentified birds were between Oahu and Johnston Atoll. Several dark birds were included. The largest group was a flock of 10.

White-tailed Tropicbird

(Overall decrease from December of from 18 to 8 birds (7 sightings).

Grid: Decrease of 2: One bird was seen in the NE corner of the Grid about 160 mi. S. of Johnston Atoll.

Non-Grid: Decrease of 8: Seven birds were observed at scattered localities between 75 mi. SW Oahu and 75 mi. NE Johnston Atoll.

Red-tailed Tropicbird

(An overall increase from December of from 6 to 14 birds (13 sightings).

Grid: Increase of 7: Nine single birds were seen - three in the SE corner of the Grid; the remainder in the WC part of the grid between 100 and 250 miles of Johnston Atoll. Several were observed sitting on the water and most birds did not fly near the ship. Two unidentified tropicbirds observed at a considerable distance may have been this species.

Non-Grid: Increase of 1: five birds recorded as follows: 400 and 110 (2 birds) SW of Oahu and 125 and 15 mi. NE of Johnston Atoll.

Blue-faced Booby

(An overall decrease from December of from 18 to 17 birds (15 sightings).

Grid: Decrease of one; six single, adult birds were observed in the S and E two-thirds of the Grid at distances of from 110 to 275 mi. S and SW of Johnston Atoll. Birds typically showed no interest in the ship. Several were observed diving for food.

Non-Grid: No change in numbers; five birds (3 adult; 2 immatures) were observed between 75 mi. SW of Oahu and Johnston Atoll; three birds were observed within 20 miles N and NW of Johnston Atoll on 15 January. The same day three were observed sitting in a flock of about 15 Red-footed Boobies.

Red-footed Booby

(An overall increase from December of from 22 to 120 (53 sightings).

Grid: Increase of six: seven sightings of nine birds were made including a group of three (1 adult; 2 immatures). Six sightings were in the western half of the grid; one in the SE corner over 275 mi. SW Johnston Atoll.

Seven of the birds observed were immatures, one an adult; 1 unclassified.

Two single unidentified boobies recorded in the NE part of the Grid may have been this species.

Non-Grid: Increase of 91; twenty-two sightings representing 29 birds were observed over a wide area between Oahu and 200 mi. NE Johnston Atoll. Single immatures came aboard ship on the nights of 5 Jan. and 6 Jan. Twenty-four sightings representing 81 individuals were seen along a 65 mile line N and ENE of Johnston Atoll on 15 January; all within 45 mi. of the Atoll. Flocks contained up to 15 birds, largely adults, and most of the flocks were sitting on the water during very calm seas - the first time that I have observed this. Four birds were collected.

Unfortunately age was not always recorded clearly but the fragmentary data is very interesting: of 32 birds seen some distance (over 50 mi.) from Johnston Atoll, six were adult, 20 "immature or subadult", and six were unrecorded. Of 64 birds seen near (most within 50 mi.) Johnston Atoll, the corresponding figures were 30; 17; and 17 (mostly adults from memory).

Five sightings involving eight individuals were too distant for species determination; five of these within 30 miles of Johnston Atoll.

Brown Booby

(No change in numbers from December.)

Grid: Not recorded.

Non-Grid: One was observed about 19 mi. WNW of Johnston Atoll on 15 January. (One was also observed on a buoy just outside Pearl Harbor).

Great Frigatebird

(A decrease from December of from 37 to 16 birds (12 sightings).

Grid: Decrease of eight. Three sightings (5 male birds) were made as follows: SE Corner; NC corner; SW corner, all at distances over 300 mi. from Johnston Atoll.

Non-Grid: Decrease of 13. Four sightings (6 birds) were made within 55 mi. Johnston Atoll. Other single birds were as follows: 95 mi. SW Oahu; about 325 mi. SW Oahu (3 sightings); 210 mi. NE Johnston Atoll.

Pomarine Jaeger

(No change in numbers.) A total of 12 recorded.

Grid: Not recorded in January (2 in December).

Non-grid: Increase of two (largest number seen at any one time considered total for day). Jaegers followed the ship from a few miles outside Pearl Harbor to just before sundown about 45 mi. SW of Oahu. Roger Clapp believes that the increased calling which he noticed was due to increased density. On return a few were again observed just outside the harbor.

Laughing (?) Gull

(Not observed in December).

Grid: Not recorded.

Non-Grid: A single male was collected from the ship on 15 January while approximately 19 mi. NNW of Johnston Atoll.

Gray-backed Tern

(Not recorded during December).

Grid: Not recorded.

Non-grid: Two birds were observed in a mixed flock of terns on 5 January approximately 200 mi. SW of Oahu. On 15 January one bird, first identified as a Sooty Tern, was observed at a distance in front of the ship. The bird alighted on a piece of floating wood and as it floated by was positively identified as this species. In good light this species was recognizable at several hundred yards.

On 18 January a single, "gray-backed" tern was seen at moderate range about 95 mi. SW Oahu. No black cap was seen and the bird may have been another species in winter plumage.

Sooty Tern

(Decrease from December of from 999 to 503 birds (68 sightings).

Grid: None recorded during daylight hours - compared with 93 in December. (See nocturnal observations).

Non-Grid: Decrease of 403; forty sightings, involving over half of all Sooty Terns observed, were recorded within 100 mi. of Oahu. An additional 18 sightings were made between 100 and 300 mi. SW Oahu. Diurnal sightings of Sooty Terns greatly decreased as we approached Johnston Atoll. Flock size ranged from 5 to 70 birds. Almost half of all Sooty Terns flocks were within 100 mi. of Oahu. Immature birds were positively identified in some flocks. Of 25 bird flocks containing Sooty Terns, 10 were mixed feeding flocks; 7 were mixed non-feeding flocks and 8 were non-feeding Sooty Terns only.

In addition three other flocks totalling 19 birds, and a single bird were probably of this species but were too distant for positive identification.

Common Noddy

(Not recorded in December).

Grid: Not recorded.

Non-Grid: Two birds were observed in a small flock of mixed terns on 5 January about 200 mi. SW Oahu; a third was seen following this flock a few minutes later. Three sightings of 11 birds (all in mixed flocks) were observed in an area 75-105 mi. SW Oahu on 18 January.

Fairy Tern

(An increase from December of from 25 to 37 (17 sightings).

Grid: Not recorded.

Non-Grid: Increase of 12. All observations were within 250 mi. SW of Oahu and 13 of the sightings were within 100 mi. of Oahu. Eleven of the sightings were in flocks of mixed species; five of these flocks were obviously feeding.

Bird Flocks

No bird flocks were observed in the Grid in January - compared with six in December. Thirty-three flocks were observed outside the Grid. Of this number 8 were obviously feeding. Twenty one flocks contained more than one species.

Nocturnal Observations

Nocturnal observations are of limited value for the most part since only a few birds are near enough to the ship for observation. Also only calling birds are usually recorded and most species call very little. As before unidentified shearwater-petrel types were observed flying across

moonlit areas of ocean. Also tropicbirds (including a positive Red-tailed) and Red-footed Boobies were recorded as was a Black-footed Albatross following the ship.

The most exciting findings, however, were of large numbers of Sooty Terns recorded during some evenings despite a complete absence of this species in the same areas during the day. Figure 1 shows the relative location of each night's observations and the minimum number of birds observed, based largely on call notes. No detailed analysis will be attempted at this time. A minimum of 254 Sooty Terns were recorded during four nights of observation within the grid (see Table V). Some flocks circled the ship but others seemed to be flying toward Johnston Atoll. No reverse morning flight was observed. This situation needs to be explored in much more detail next season.

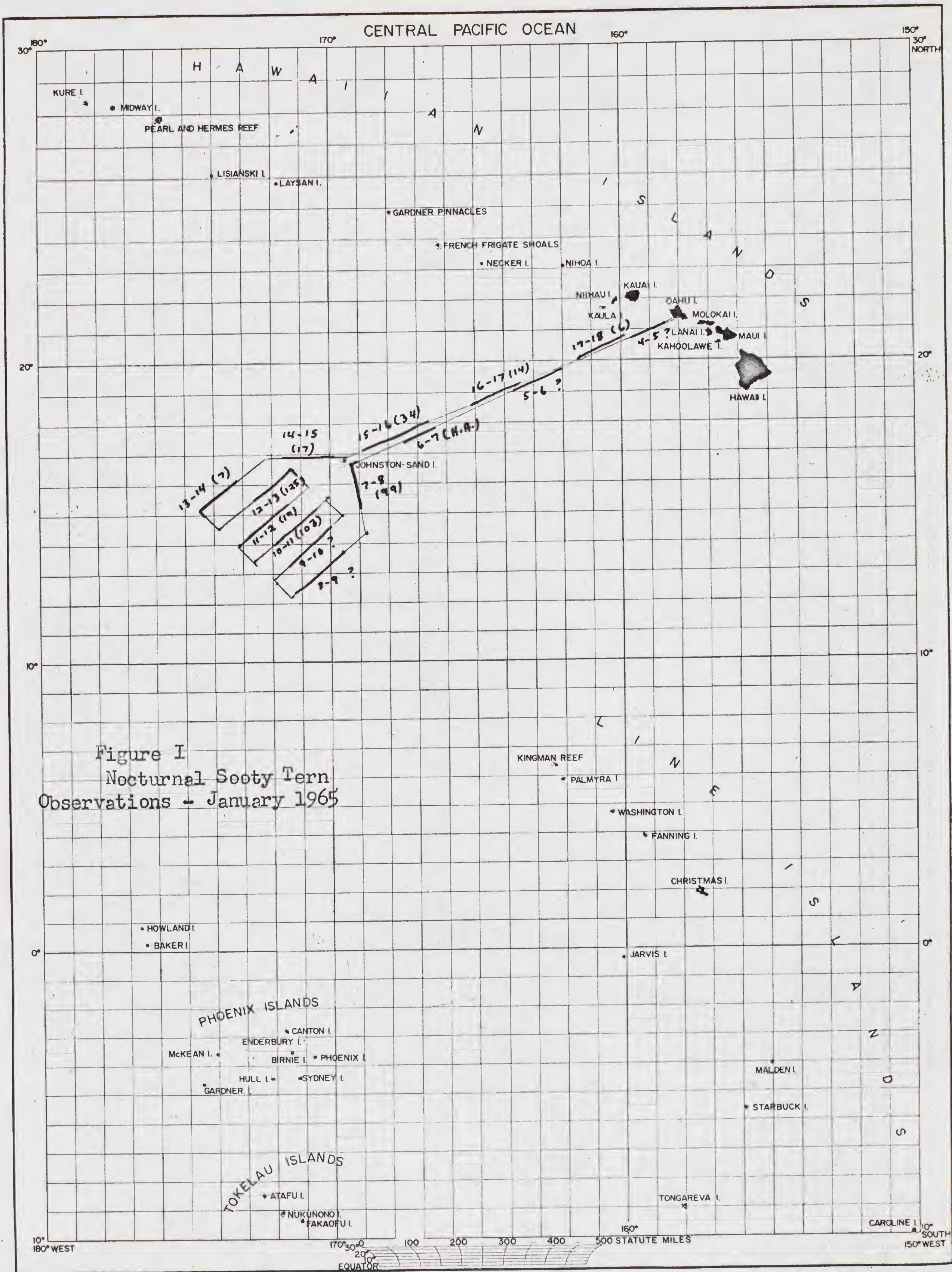


Table I. Daily mileage and observation time (sunrise to sunset) logged during At sea Survey 18, January 1965.

<u>Date</u>	OUTSIDE Grid (Sunrise to sunset)	
	<u>Total Miles Covered</u>	<u>Total Minutes</u>
4 Jan.	65	593
5 Jan.	87	665
6	98	673*(time plus
7	91	678 1 hr. change)
8	42	256
15	63	683
16	101	663
17	98	685
18	118	672
Total	763	5568 (92.8 hr)

INSIDE Grid (Sunrise to sunset)		
8 Jan.	71	425
9	93	677
10	82	673
11	106	688
12	98	680
13	116	686
14	122	671
Total	688	4500 (75 hr)

Table II. Nightly mileage and observation time (sunset to sunrise) logged during At Sea Survey 18, January 1965.

OUTSIDE Grid

<u>Date</u>	<u>number of Miles Covered</u>	<u>number of minutes</u>
7- 8 Jan.	110	764
14-15	100	758
15-16	130	747
16-17	89	744
17-18	126	764
Total	555	3777 (60.3 hr)

INSIDIE Grid

10-11 Jan.	126	772
11-12	110	755
12-13	127	766
13-14	103	759
Total	466	3052 (50.9 hr)

Table III. Density and population estimates for grid during January 1965

<u>Group</u>	<u>Number seen</u>	<u>Birds/linear mile</u>	<u>Birds/square Mile</u>	<u>% of Total</u>	<u>Estimated Grid Total</u>
Shearwater-Petrel	26	.038	.019	42	950
Tropicbirds	12	.018	.009	19	450
Tern	0	-	-	-	-
Shorebirds	0	-	-	-	-
Boobies	17	.024	.012	27	600
Frigates	6	.009	.003	10	150
Flocks	0	-	-	-	-
Feeding flocks	0	-	-	-	-
Total	62	.09	.045		2250

Table IV. Comparison of bird densities in four grid quadrats, January 1965

<u>Quadrat</u>	<u>Linear miles</u>	<u>Minutes</u>	<u>Miles/Minute</u>	<u>Birds</u>	<u>Density</u>
East	153	1098	.14	12	.078
South	166	1105	.15	13	.078
West	157	946	.17	20	.127
North	220	1351	.17	17	.077

TABLE V. Summary of Nocturnal Sooty Tern Observations, January 1965

<u>Time</u>	<u>7-8</u>	<u>10-11</u>	<u>11-12</u>	<u>12-13</u>	<u>13-14</u>	<u>14-15</u>	<u>15-16</u>	<u>16-17</u>	<u>17-18</u>
Sunset - 2000	18		0	2-3	0	0	8-9	0	0
2001-2100	11-14		1	2	0	5	7	2	0
2101-2200	1		0	28-38	0	5	6-7	3	2
2201-2300	4	55-67	0	34-50	0	2	3	1	1
2301-0000	14-16	12-14	1	18-31	2	2	5	4-5	0
0001-0100	11-13	13-16	0	27-38	2	0	3	1-2	0
0101-0200	12	3	2	5	0	1	1	0	1
0201-0300	11	12	6	3	2	1	0	2	0
0301-0400	9	5	5	2	1	1	0	0	0
0401-0500	6	3	4	4	0	0	1	0	1
0501-0600	2	-	0	0	0	0	0	1	1

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: 18 Jan 1964 Total Minutes: 0719-1832 672 Total Miles 118

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>67</u>	<u>321</u>	<u>4.79</u>	<u>1.76 272</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>24</u>	<u>6</u>	<u>3</u>	<u>-</u>	<u>58</u>	<u>7</u>	<u>19</u>	<u>-</u>	<u>0.41</u>	<u>1.17</u>	<u>6.35</u>	<u>0.00</u>	<u>.49</u>	<u>.06</u>	<u>.16</u>	

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>1.50</u>	<u>2.00</u>	<u>1.00</u>	<u>.02</u>	<u>.02</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>41</u>	<u>248</u>	<u>6.05</u>	<u>2.10</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>4</u>	<u>-</u>	<u>3</u>	<u>-</u>	<u>5</u>	<u>-</u>	<u>4</u>	<u>-</u>	<u>1.20</u>	<u>1.25</u>	<u>.05</u>	<u>.03</u>				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.01</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>11</u>	<u>155</u>	<u>.09</u>	<u>2</u>	<u>37</u>	<u>.02</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: 17 Jan. 1965 Total Minutes: 685 Total Miles 98

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>18[*]</u>	<u>107[*]</u>	<u>6.0</u>	<u>1.09</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>10</u>	<u>3</u>	<u>2</u>	<u>-</u>	<u>40</u>	<u>13</u>	<u>2</u>	<u>-</u>	<u>4.0</u>	<u>4.3</u>	<u>1.0</u>	<u>-</u>	<u>.41</u>	<u>.13</u>	<u>.02</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>7</u>	<u>62</u>	<u>.89</u>	<u>.63</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>.01</u>	<u>-</u>	<u>.01</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>3</u>	<u>1.0</u>	<u>.03</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>78</u>	<u>.02</u>	<u>1</u>	<u>58</u>	<u>.01</u>

* albatross data - available.

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: 16 Jan. 1964 Total Minutes: 663 Total Miles 101

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>18</u>	<u>3.0</u>	<u>.18</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>2</u>	<u>1</u>	<u>0</u>	<u>-</u>	<u>2</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>.02</u>	<u>.01</u>	<u>-</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>12</u>	<u>4.0</u>	<u>.12</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>2</u>	<u>0</u>	<u>2</u>	<u>-</u>	<u>3</u>	<u>-</u>	<u>3</u>	<u>0</u>	<u>1.5</u>	<u>-</u>	<u>1.5</u>	<u>-</u>	<u>.03</u>	<u>-</u>	<u>.03</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.0</u>	<u>.01</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>9</u>	<u>.01</u>	<u>1</u>	<u>9</u>	<u>.01</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

0653-1816

DATE: 15 Jan. 1965 Total Minutes: 683 Total Miles 63

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>35</u>	<u>141</u>	<u>4.03</u>	<u>2.22</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>.016</u>	<u>-</u>	<u>-</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>.016</u>	<u>.016</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>7</u>	<u>46</u>	<u>6.5</u>	<u>.73</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>29</u>	<u>4</u>	<u>22</u>	<u>1</u>	<u>90</u>	<u>6</u>	<u>78</u>	<u>1</u>	<u>3.1</u>	<u>1.5</u>	<u>3.5</u>	<u>1.0</u>	<u>1.43</u>	<u>.095</u>	<u>1.25</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>2</u>	<u>1.0</u>	<u>.031</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>8</u>	<u>91</u>	<u>.13</u>	<u>2</u>	<u>38</u>	<u>.03</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

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1900

DATE: 14 January 1965 Total Minutes: 671 Total Miles 122

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>4</u>	<u>4</u>	<u>1.0</u>	<u>.033</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>3</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>3</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>.024</u>	<u>-</u>	<u>.008</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>.008</u>	<u>-</u>	<u>.008</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: 13 January 1964 Total Minutes: 0741-1825
686 Total Miles 116

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>15</u>	<u>19</u>	<u>1.26</u>	<u>.16</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>8</u>	<u>1</u>	<u>4</u>	<u>-</u>	<u>10</u>	<u>1</u>	<u>5</u>	<u>-</u>	<u>1.25</u>	<u>1.0</u>	<u>1.25</u>	<u>-</u>	<u>.085</u>	<u>.009</u>	<u>.043</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>5</u>	<u>4</u>	<u>-</u>	<u>5</u>	<u>4</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>.042</u>	<u>.034</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>2</u>	<u>-</u>	<u>2</u>	<u>-</u>	<u>2</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>.017</u>	<u>-</u>	<u>.017</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>2</u>	<u>2.0</u>	<u>.017</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: 12 January 1964 Total Minutes: 0701-1825 680 Total Miles 98

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>11</u>	<u>13</u>	<u>1.18</u>	<u>.13</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>4</u>	<u>3</u>	<u>-</u>	<u>-</u>	<u>4</u>	<u>3</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>.04</u>	<u>.03</u>	<u>-</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>2</u>	<u>-</u>	<u>3</u>	<u>2</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>.03</u>	<u>.02</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>4</u>	<u>1</u>	<u>3</u>	<u>-</u>	<u>6</u>	<u>1</u>	<u>5</u>	<u>-</u>	<u>1.5</u>	<u>1.0</u>	<u>1.7</u>	<u>-</u>	<u>.04</u>	<u>.01</u>	<u>.03</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: January 11, 1964 Total Minutes: 688 0652-1820 Total Miles 106

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>6</u>	<u>1.0</u>	<u>.06</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>4</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>.04</u>	<u>.009</u>	<u>.02</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>1</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>.009</u>	<u>.009</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: January 10, 1965 Total Minutes: 0647⁶⁷³ - 1800 Total Miles 82

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>5</u>	<u>5</u>	<u>1</u>	<u>.06</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>1</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>.01</u>	<u>.01</u>	<u>-</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>3</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>3</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>.03</u>	<u>.02</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1</u>	<u>.01</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: January 9, 1965 Total Minutes: ⁶⁷⁷705 (0648-1805) Total Miles 93

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>4</u>	<u>8</u>	<u>2</u>	<u>.09</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>0</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>3</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>.03</u>	<u>.01</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>—</u>	<u>—</u>	<u>—</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>—</u>	<u>—</u>	<u>—</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>2</u>	<u>1</u>	<u>1</u>	<u>—</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>—</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>—</u>	<u>.02</u>	<u>.01</u>	<u>.01</u>	<u>—</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.50</u>	<u>.03</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

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total

42 outside grid to 1100
71 inside grid after 1100

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: January 8, 1965 Total Minutes: ^{44 1805} ~~068~~ ^{678 681} ~~1725~~ (155) Total Miles 112

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>9</u>	<u>9</u>	<u>1</u>	<u>0.08</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>6</u>	<u>1</u>	<u>3</u>	<u>-</u>	<u>6</u>	<u>1</u>	<u>3</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>.05</u>	<u>.01</u>	<u>.03</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>1.0</u>	<u>-</u>	<u>1</u>	<u>.01</u>	<u>-</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>2</u>	<u>1</u>	<u>-</u>	<u>+</u>	<u>2</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>.02</u>	<u>.01</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

Outside grid

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: Jan. 8 1965 Total Minutes: 256 Total Miles: 42
0644-1100

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>2</u>	<u>1.0</u>	<u>0.05</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>-</u>	<u>0.05</u>	<u>-</u>	<u>.05</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>0</u>

Inside Bird

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: Jan. 8 1964 Total Minutes: 425 ^{400 - 1805} Total Miles 71

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>7</u>	<u>7</u>	<u>1.0</u>	<u>0.1</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>4</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>.06</u>	<u>.01</u>	<u>.01</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>.01</u>	<u>-</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>2</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>2</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>-</u>	<u>.02</u>	<u>.01</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: Jan 7, 1965

Total Minutes: ⁶⁷⁸660 (^{0642 1800}~~0700-1800~~)

Total Miles 91 ⁽⁴⁴⁾

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
²⁰ 18	²⁹ 25	1.57 1.45	0.27 0.32

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
13	3			17	7			1.23	2.50	1.0		0.18			
12	2	6	-	15	8	6	-	1.30	2.33			0.19	0.05	0.07	-

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
2	1	1	3	1	2	1.5	1	2	0.03	0.01	0.02

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	2	2	0.02

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	—	—	—

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
1	2	—	—	1	0	2	—	2	—	2.0	—	0.02	—	—	—

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	4	2	0.04

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
0	—	—	—	—	—

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: Jan 6, 1965

Total Minutes: ⁶⁷⁴~~657~~ (0728-1842) Total Miles ⁹⁸~~95~~

1 hr. Time Change

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
23	26	1.12	0.27

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
15	5	3	-	18	8	3	-	1.20	1.40	1	-	0.19	0.08	0.03	-

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
2	1	1	2	1	1	1	1	1	0.02	0.01	0.01

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	-	-	-

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	-	-	-

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
5	1	4	-	5	1	4	-	1	1	1	-	0.05	0.01	0.04	-

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	-	-	-

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
0	-	-	-	-	-

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: January 5, 1965 Total Minutes: 665 (0720-1825) Total Miles 87
88

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>63</u>	<u>245</u>	<u>3.89</u>	<u>2.78</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	Pt	Bu	T	WT	Pt	Bu	T	WT	P	B	T	WT	P	B
<u>48</u>	<u>32</u>	<u>5</u>	<u>0</u>	<u>70</u>	<u>50</u>	<u>5</u>	<u>0</u>	<u>1.48</u>	<u>1.56</u>	<u>1</u>	<u>0</u>	<u>0.80</u>	<u>0.57</u>	<u>0.06</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>-</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>2</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>.02</u>	<u>-</u>	<u>0.02</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>12</u>	<u>162</u>	<u>13.50</u>	<u>1.84</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>9</u>	<u>3</u>	<u>6</u>	<u>-</u>	<u>12</u>	<u>3</u>	<u>9</u>	<u>-</u>	<u>1.33</u>	<u>1</u>	<u>1.50</u>	<u>-</u>	<u>0.11</u>	<u>0.04</u>	<u>0.08</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>6</u>	<u>169</u>	<u>0.08</u>	<u>2</u>	<u>97</u>	<u>0.02</u>

122
187
309

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

To sunset

DATE: 4 January 1965 Total Minutes: 593 Total Miles 65

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>24</u>	<u>70</u>	<u>2.90</u>	<u>1.08</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>5</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>10</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>2.0</u>	<u>1.33</u>	<u>0</u>	<u>0</u>	<u>.10</u>	<u>.06</u>	<u>-</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>0</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>1.0</u>	<u>-</u>	<u>1.0</u>	<u>.03</u>	<u>0</u>	<u>.03</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>9</u>	<u>46</u>	<u>5.1</u>	<u>.71</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>7</u>	<u>1</u>	<u>7</u>	<u>0</u>	<u>12</u>	<u>1</u>	<u>9</u>	<u>0</u>	<u>1.33</u>	<u>1.0</u>	<u>1.28</u>	<u>-</u>	<u>7.18</u>	<u>1.01</u>	<u>.14</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>5</u>	<u>43</u>	<u>.077</u>	<u>0</u>	<u>-</u>	<u>-</u>

* albatrosses + jaegers repeat sightings!?!
+ one in harbor

Need to be recalculated according to Pat's latest method!?!?

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 5 January

TIME	LAT	N	LONG	W	PRES	WEA	VIS	(SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	30	38	159	57	Bkn		10	1010	74	71	91	6		350-1	82	11	320	347
0200	30	26	160	07			10	1010	74	71	91	7		340-1	83	9	300	
0300	30	33	160	14			10	1010	72	69	91	7		340-1	83	8	300	
0400	30	30	160	16			10	1009	75	68	82	6		300-2	82	10	275	
0500	30	17	160	28			10	1009	74	68	82	6		300-2	82	10	378	
0600	30	14	160	35			10	1009	74	70	86	6		300-2	82	12	346	
0700	20	11	16	43			10	1008	75	71	91	6		300-2	81	9	382	247
0800	20	08	160	48	BKN		10	1002	75	71	86	9		170-2	81	11	225	345
0900	20	04	160	57			10	1007	75	71	86	9		170-2	81	10	225	345
1000	20	03	161	05			10	1007	75	71	86	9		170-2	81	12	225	345
1100	20	00	161	12			10	1007	76	72	87	9		170-2	81	11	200	345
1200	19	56	161	31			10	1006	77	73	87	9		180-2	81	11	200	345
1300	19	52	161	38			8	1005	78	74	87	9		180-2	81	10	200	343
1400	19	49	161	35			8	1004	78	74	87	8		180-2	81	11	200	
1500	19	46	161	42			8	1004	78	72	83	8		180-2	81	11	200	
1600	19	41	161	52			10	1004	79	76	91	9		180-2	81	25+	230	
1700	19	39	161	57			10	1005	79	76	91	8		180-2	82	25+	235	
1800	19	37	162	04			10	1005	79	75	87	8		180-2	82	8	240	
1900	19	34	162	12			10	1006	79	75	87	8		180-2	82	11	240	
2000	19	31	162	20			8	1007	79	75	87	8		180-2	82	30	245	
2100	19	36	162	37			6	1007	79	76	91	9		180-2	82	20	245	
2200	19	22	162	35			8	1009	79	76	91	9		180-2	82	5	245	
2300	19	18	162	43			13	1009	79	76	91	9		180-2	82	5	270	
2400	19	13	162	51			13	1007	79	76	91	9		180-2	82	5	270	342

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 6 Jan 1965

TIME	LAT	N	LONG	W	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	19	10	162	59		BK U	10	1006	71	68	90	9		305-2	81	9	310	243
0200	19	05	163	06			10	1006	70	67	90	9		305-2	81	9	305	
0300	19	01	163	14			10	1006	70	67	90	9		305-2	81	8	315	
0400	18	38	163	22			8	1006	75	71	86	9		305-2	81	10	315	
0500	18	54	163	30			10	1006	74	68	82	5		300-2	81	8	315	
0600	18	51	163	39			10	1006	74	68	82	8		300-2	81	8	315	
0700	18	48	163	46			10	1006	74	68	82	8		300-2	81	8	315	
0800	18	45	163	53		SCY	10	1006	74	70	86	4		300-2	81	8	330	
0900	18	42	164	02			10	1007	76	72	87	2		300-2	81	8	330	
1000	18	38	164	11			10	1008	76	72	87	2		300-2	81	8	330	343
1100	18	34	164	19			12	1008	77	73	87	2		300-2	82	5	330	346
1200	18	30	164	29			12	1008	77	73	87	2		300-2	82	5	330	346
1300	18	27	164	36			12	1008	78	74	83	2		300-2	82	10	340	248
1400	18	24	164	45			12	1008	78	74	83	2		300-2	82	10	340	
1500	18	21	164	54			12	1008	78	74	83	2		300-2	82	10	340	
1600	18	18	165	02			12	1008	78	74	83	2		300-2	82	10	340	
1700	18	15	165	11			12	1008	77	74	91	4		300-2	82	10	340	
1800	18	12	165	23			12	1008	77	74	91	4		300-2	82	10	320	
1900	18	09	165	32			12	1009	76	72	87	4		300-2	81	10	320	348
2000	18	06	165	41			10	1010	76	72	87	4		310-2	82	5	320	346
2100	18	01	165	51			10	1010	76	72	87	4		310-2	82	12	075	
2200	17	57	166	01			10	1010	76	72	87	4		310-2	82	10	075	
2300	17	52	166	11			10	1010	76	72	87	4		310-2	82	10	300	
2400	17	48	166	21			10	1011	76	72	87	4		310-2	82	10	300	246

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

1700Z DETACHED ALL
1600Z2
0100Z2
0200Z2
0300Z2
0400Z2
0500Z2
0600Z2
0700Z2
0800Z2
0900Z2
1000Z2
1100Z2
1200Z2
1300Z2
1400Z2
1500Z2
1600Z2
1700Z2
1800Z2
1900Z2
2000Z2
2100Z2
2200Z2
2300Z2
2400Z2

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE JAN 7 1965

TIME	LAT	^x LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17	44	166 31	SET	10	1008	72	69	91	4	000-2	81	9	010	246
0200	17	40	166 41		10	1009	72	69	91	4	000-2	81	17	010	↑
0300	17	36	166 51		10	1009	72	69	91	4	255-2	81	10	085	
0400	17	32	167 02		10	1009	72	69	91	4	000-2	81	9	010	
0500	17	28	167 12		10	1009	72	69	91	2	000-2	81	17	010	
0600	17	23	167 23		10	1009	73	69	86	3	350-2	81	13	060	
0700	17	21	167 34		10	1009	73	70	91	2	250-2	81	10	240	
0800	17	17	167 45		10	1010	73	70	91	2	250-2	81	10	240	
0900	17	15	167 50		10	1011	74	71	91	3	340-2	81	10	300	
1000	17	12	167 56		10	1011	76	73	87	3	240-2	81	10	320	
1100	17	10	168 02		10	1009	77	74	91	3	340-2	81	6	320	
1200	17	08	168 08		10	1009	77	74	91	3	340-2	84	6	320	
1300	17		168 17	↓	10	1008	87	84	92	2	045-2	84	8	320	
1400	16 59		168 26	CLR	10	1008	88	85	92	1	045-2	85	8	320	
1500	16 57		168 35		10	1008	87	83	88	1	045-2	85	8	320	
1600	16 52		168 44		10	1008	87	82	88	1	045-2	85	8	320	
1700	16 48		168 55		10	1008	86	82	88	1	045-2	82	8	320	246
1800	16 44		169 06		10	1008	86	82	88	1	050-2	82	5	280	555
1900	16 41		169 15		10	1008	86	82	88	1	050-2	82	5	280	555
2000	16 34		169 17		10	1008	83	79	88	1	240-2	82	5	235	168
2100	16 26		169 15		10	1009	80	77	91	1	180-2	82	5	175	↑
2200	16 18		169 13		10	1009	77	74	91	1	180-2	82	5	175	
2300	16 08		169 11		10	1009	74	71	91	1	175-2	82	5	170	↓
2400	16 00		169 01	SET	10	1005	73	70	91	2	175-2	82	5	170	168

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 8 Jan. 1965

TIME	LAT ^N	LONG ^W	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15 52	168 07	CLR	10	1008	74	71	81	2		175-2	81	8	300	168
0200	15 43	168 05		10	1007	73	69	86	1		175-2	84	6	200	
0300	15 35	168 03		10	1007	73	69	86	5		175-2	84	6	300	
0400	15 25	168 01		10	1007	76	72	87	2		175-2	84	12	300	
0500	15 17	168 00		10	1007	76	72	87	4		175-2	84	12	300	
0600	15 10	168 56		10	1007	76	72	87	4		175-2	84	12	300	
0700	15 01	168 52		10	1007	76	72	87	4		175-2	84	12	300	
0800	14 53	168 51		10	1007	76	72	87	4		175-2	84	12	300	
0900	14 44	168 49		10	1007	76	72	87	4		175-2	84	12	300	
1000	14 35	168 47		10	1007	76	72	87	4		175-2	84	12	300	
1100	14 26	168 45	↓	10	1007	76	72	87	4		175-2	84	12	300	
1200	14 18	168 42	SCY	10	1006	86	82	88	4		175-2	84	12	200	
1300	14 11	168 39		10	1006	86	88	92	4		175-2	84	10	200	
1400	14 04	168 38		10	1006	86	88	92	4		070-1	84	5	170	
1500	13 57	168 35		10	1005	86	88	92	4		070-1	84	4	170	
1600	13 50	169 22	↓	10	1005	84	81	92	4		070-1	84	4	170	
1700	13 41	169 21	BKN	10	1005	82	79	92	6		070-1	84	4	170	
1800	13 34	169 38		10	1006	83	79	92	6		070-1	84	4	170	
1900	13 23	169 45		10	1006	82	79	92	6		070-1	84	4	170	168
2000	13 17	169 56		10	1006	82	79	92	6		070-1	84	4	170	225
2100	13 11	170 04	↓	10	1007	82	79	92	5		070-2	84	4	170	225
2200	13 05	170 13	SCY	10	1007	80	76	83	4		070-2	84	4	200	225
2300	12 59	170 21		10	1007	80	76	83	4		070-2	84	4	200	228
2400	12 55	170 28	↓	10	1007	80	76	83	4		070-2	84	4	200	228

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

20
5.0 01 1 10

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 9 Jan. 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12 50	170 35	Sc+	10	100.7	80	76	87	5		070-2	84	3	210	228
0200	12 45	170 42	Sc+	10	100.6	79	76	91	5		070-2	84	4	210	
0300	12 39	170 50	BKN	10	100.6	79	76	91	6		070-2	84	2	220	
0400	12 34	170 56	BKN	10	100.6	78	75	91	8		230-1	84	1	230	
0500	12 29	171 04		10	100.6	77	74	91	8		230-1	84	4	240	
0600	12 25	171 09		10	100.6	75	72	91	8		340-1	84	11	220	
0700	12 20	171 14		10	100.6	78	75	93	6		340-1	84	11	220	
0800	12 16	171 20		10	100.7	79	76	91	6		340-1	84	10	210	228
0900	12 19	171 28		10	100.8	79	76	91	6		340-1	86	10	210	315
1000	12 31	171 34		10	100.7	79	76	91	6		340-2	86	10	210	315
1100	12 38	171 40		10	100.7	80	77	91	6		340-2	86	10	210	315
1200	12 45	171 40		10	100.7	80	77	91	6		340-2	86	10	210	315
1300	12 49	171 44		10	100.6	83	79	88	4		020-2	85	10	020	045
1400	12 55	171 48		10	100.6	83	79	88	4		020-2	85	10	034	045
1500	13 01	171 53		10	100.6	83	79	88	4		020-2	85	10	030	045
1600	13 07	171 56	Sc+	12	100.6	83	79	88	2		020-2	85	12	020	043
1700	13 13	171 51		12	100.6	83	79	88	2		020-2	85	12	040	
1800	13 17	171 47		12	100.6	79	75	91	4		020-2	85	12	020	
1900	13 23	171 41		12	100.6	78	75	91	4		020-2	85	13	020	
2000	13 28	171 37	BKN	13	100.6	76	73	91	6		030-2	85	13	020	
2100	13 36	170 59		15	100.7	74	71	91	6		030-2	85	15	030	
2200	13 41	170 54		15	100.7	74	70	86	6		030-2	85	15	020	
2300	13 49	170 46		15	100.7	72	69	91	6		050-2	85	15	020	
2400	13 57	170 40		15	100.7	72	69	91	6		050-2	85	15	020	043

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

40.5
71
110.5

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DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 10 Jan 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14 05	170 34	CLR	12	1006	78	74	87	—		050-2	84	8	020	045
0200	14 10	170 28		10	1006	77	73	87	—		050-2	84	8	020	
0300	14 15	170 24		10	1006	75	72	91	—		050-2	84	8	020	
0400	14 22	170 18		10	1006	73	70	91	—		050-2	84	8	020	
0500	14 28	170 12		10	1007	71	70	95	—		050-2	84	8	020	
0600	14 33	170 07		10	1007	70	69	95	—		050-2	84	8	020	
0700	14 41	170 00		10	1008	70	69	95	—		050-2	84	8	020	
0800	14 48	169 53		10	1007	72	66	82	2		000-1	84	7	060	045
0900	14 51	169 45		10	1008	73	67	82	2		000-1	84	7	060	047
1000	15 02	169 37		10	1007	77	71	83	1		000-1	84	5	050	047
1100	15 07	169 33		10	1007	80	73	79	1		000-1	84	8	041	047
1200	15 14	169 27		10	1007	82	75	80	1		000-1	84	6	045	315
1300	15 17	169 20		10	1007	82	75	80	1		000-1	84	6	045	315
1400	15 16	169 17		10	1006	83	78	80	2		000-1	84	6	045	315
1500	15 20	169 12		10	1006	83	78	84	2		000-1	84	6	045	315
1600	15 18	169 06		10	1006	80	77	91	2		000-1	84	6	045	225
1700	15 12	169 00		10	1006	80	77	91	2		000-1	84	6	045	
1800	15 06	169 54		10	1007	82	79	92	2		000-1	84	6	045	
1900	14 58	170 01		10	1007	81	78	88	2		000-1	84	6	045	
2000	14 54	170 05		10	1007	81	78	88	2		000-1	84	6	045	225
2100	14 49	170 21		10	1007	81	78	88	2		000-1	84	6	045	232
2200	14 41	170 28		10	1007	81	78	88	2		000-1	84	6	180	
2300	14 38	170 37		10	1007	81	78	88	2		000-1	84	6	180	
2400	14 39	170 46	SCT	10	1008	80	77	91	2		015-1	84	5	110	232

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 11 Jan 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14 25	170 55	Sct		1008	80	74	87	3		075-1	84	8	075	232
0200	14 26	171 03	↑		1007	79	75	87	3		080-1	84	9	115	↑
0300	14 25	171 11			1006	78	75	91	3		080-1	84	9	050	↑
0400	14 10	171 19			1006	77	74	91	3		080-1	84	9	050	↑
0500	14 04	171 28			1006	76	73	91	3		080-1	84	9	050	↑
0600	13 59	171 37			1007	76✓	73	91	3		080-1	85	8	050	↑
0700	13 52	171 41			1007	76	73	96	3		080-1	85	8	050	↑
0800	13 46	171 48			1008	79	75	87	3		080-1	84	8	050	↑
0900	13 40	172 06			1008	80	77	91	2		080-1	85	8	050	↑
1000	13 34	172 15		↓	1008	84	76	87	2		080-2	85	8	050	↓
1100	13 27	172 23		10	1008	88	76	87	2		080-2	85	8	050	↓
1200	13 21	172 32			1006	84	76	87	3		340-2	85	8	340	232
1300	13 28	172 40			1006	82	77	92	3		340-2	85	9	340	315
1400	13 34	172 46			1006	81	76	87	3		340-2	85	9	340	↑
1500	13 39	172 50			1006	79	74	91	4		340-2	85	7	340	↓
1600	13 40	172 58			1006	79	76	91	4		340-2	85	5	340	↓
1700	13 52	173 01			1006	79	76	91	4		340-2	85	5	340	315
1800	14 00	172 55			1006	79✓	76	91	4		340-2	85	5	000	045
1900	14 09	172 49	↓		1006	79	76	91	4		340-2	85	5	000	↑
2000	14 14	172 44	Sct		1006	79	76	91	4		340-2	85	5	000	↑
2100	14 22	172 38	Bkn		1009	78	75	91	6		340-2	85	15	000	↑
2200	14 21	172 33	Bkn		1009	78	75	91	6		340-2	84	12	000	↓
2300	14 35	172 27	Bkn	↓	1009	75	74	96	6		340-2	84	12	000	↓
2400	14 42	172 21	Sct		1009	82	77	88	5		340-2	84	8	060	045

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 12 Jan 1965

TIME	LAT	N	LONG	W	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14	49	172	15	CLR		10	1000	82	78	88	2		340-2	84	10	045	045
0200	14	55	172	10			10	1000	81	77	88	2		350-2	84	10	045	↑
0300	15	02	172	04			10	1000	81	77	88	2		350-2	84	15	039	↑
0400	15	09	171	58			10	1000	81	77	88	2		350-2	84	15	039	↑
0500	15	16	171	52			10	1000	80	75	87	2		350-2	84	15	039	↓
0600	15	32	171	47			10	1000	81	75	84	3		350-2	84	15	039	↓
0700	15	30	171	40			10	1000	81	75	84	3		350-2	84	15	039	045
0800	15	38	171	34			10	1010	80	77	91	3		045-1	84	7	045	048
0900	15	44	171	27			10	1010	78	72	91	3		045-1	84	9	045	
1000	15	50	171	20			10	1010	80	77	91	3		045-1	84	8	045	↑
1100	15	55	171	15			10	1010	82	78	88	3		045-1	84	8	045	↑
1200	15	59	171	10			10	1008	83	78	84	3		045-1	84	8	045	↑
1300	16	05	171	02			10	1008	76	72	87	3		045-1	84	6	040	↓
1400	16	11	170	53			10	1007	76	72	87	2		045-1	84	6	040	
1500	16	17	170	45			10	1007	76	72	87	2		045-1	84	6	040	048
1600	16	22	170	35			10	1000	80	80	88	2		045-1	84	7	040	312
1700	16	28	171	02			10	1005	84	80	88	2		045-1	84	7	040	↑
1800	16	33	171	08			10	1007	81	78	91	2		045-1	84	7	040	↑
1900	16	38	171	15			10	1009	80	74	83	2		045-1	84	7	040	312
2000	16	38	171	23			10	1010	77	73	87	1		000-1	84	6	045	525
2100	16	33	171	29			10	1010	75	68	78	1		000-1	84	4	045	
2200	16	28	171	35			10	1010	73	66	78	1		000-1	84	7	045	↓
2300	16	20	171	40	SCT		10	1011	73	67	82	3		040-1	84	8	050	↓
2400	16	12	171	52	↓		10	1011	74	68	80	4		001-1	84	8	050	555

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 13 January 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16 00	171 59	BKN	10	1010	76	73	91	8		000-1	84	4	050	225
0200	15 57	172 07			1010	75	74	96	7		000-1	84	4	340	
0300	15 49	172 15			1010	76	73	91	7		000-1	84	4	340	
0400	15 42	172 20			1010	74	71	91	7		000-1	84	4	340	
0500	15 35	172 20			1010	74	71	91	7		000-1	84	4	340	
0600	15 29	172 37	V		1005	74	71	91	7		000-1	84	4	340	
0700	15 19	172 44	STC		1010	76	73	91	2		250-1	84	2	225	
0800	15 07	172 53			1010	77	74	91	3		250-1	84	4	270	
0900	15 03	173 00			1011	80	77	91	4		230-2	84	2	000	
1000	15 03	173 08			1011	82	79	92	4		230-2	85	1	000	
1100	14 59	173 15			1011	85	82	92	4		230-2	85	1	000	
1200	14 57	173 20			1010	85	82	92	4		- -	85	2	275	
1300	14 52	173 29			1009	87	84	88	4		- -	85	2	220	
1400	14 46	173 37			1008	91	88	92	4		- -	85	2	185	
1500	14 40	173 46			1008	88	85	92	4		- -	85	2	190	225
1600	14 36	173 57			1008	86	83	92	4		250-2	85	2	190	315
1700	14 41	174 08			1007	86	83	91	4		250-2	85	2	190	
1800	14 48	174 17			1008	86	83	92	4		250-2	85	6	190	
1900	14 57	174 25			1008	86	83	92	5		250-2	85	2	190	
2000	15 01	174 30			1008	78	74	87	5		250-2	85	4	190	315
2100	15 07	174 24			1008	77	73	87	4		230-2	85	5	000	045
2200	15 15	174 20			1009	77	73	87	4		230-2	84	6	017	043
2300	15 18	174 14		10	1009	77	73	87	4		230-2	84	6	017	043
2400	15 24	174 08		10	1009	78	69	86	4		000-2	84	7	050	043

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 14 January 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15 30	173 59	SCT	10	1009	70	69	95	4		000-1	84	4	060	043
0200	15 37	173 52		10	1009	70	69	95	4		020-2	84	7	060	
0300	15 41	173 46		10	1009	68	67	95	4		020-2	84	8	052	
0400	15 47	173 39		10	1009	69	66	90	4		030-1	84	5	065	
0500	15 53	173 31		10	1009	69	66	90	4		030-1	84	5	025	
0600	15 58	173 24		10	1009	72	69	91	4		035-1	84	4	035	
0700	16 05	173 15		10	1010	74	68	82	4		035-1	84	4	035	043
0800	16 10	173 08		10	1010	74	71	91	3		140-2	84	4	035	045
0900	16 18	173 00		10	1015	76	75	91	3		140-2	84	4	035	
1000	16 24	172 52		10	1010	78	74	87	2		140-2	84	4	035	
1100	16 33	172 45		10	1010	78	73	83	2		140-2	84	5	030	
1200	16 39	172 38		10	1015	78	74	87	2		140-2	84	4	035	
1300	16 47	172 30		10	1010	78	74	87	2		140-2	84	4	035	045
1400	16 50	172 20		10	1009	80	76	87	4		280-2	84	4	025	050
1500	16 50	172 09		10	1009	80	76	87	4		280-2	84	4	020	
1600	16 50	171 56		10	1009	80	76	87	4		280-2	84	4	020	
1700	16 50	171 47		10	1009	80	77	91	4		280-2	84	4	020	
1800	16 50	171 32		10	1009	80	77	91	4		280-2	84	4	020	
1900	16 50	171 27		10	1009	80	76	87	4		280-2	84	4	020	
2000	16 50	171 22	CMN	10	1009	85	81	88	6		010-1	84	5	010	
2100	16 50	171 16		10	1009	79	75	87	8		010-1	84	5	010	090
2200	16 50	171 10		10	1009	74	70	86	6		010-1	84	5	010	090
2300	16 50	171 03		10	1009	74	70	86	6		030-1	84	5	065	090
2400	16 50	170 56		10	1010	74	70	86	6		030-1	84	5	065	090

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 15 Dec 1963

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16 50	170 48	BRN	10	1007	74	70	86	9		- - 1	84	5	060	090
0200	16 50	170 41		10	1007	74	70	86	9		- - 1	84	5	060	
0300	16 50	170 33		10	1008	74	70	86	9		- - 1	84	5	060	
0400	16 50	170 25		10	1009	78	72	83	9		270 - 1	84	4	050	
0500	16 50	170 16		10	1009	79	73	83	9		270 - 1	84	4	050	
0600	16 50	170 07		10	1009	77	73	87	8		270 - 1	84	4	050	
0700	16 50	169 57		10	1009	77	73	87	8		270 - 1	84	4	050	
0800	16 50	169 51		10	1009	78	74	87	8		270 - 1	84	7	095	
0900	?	169		10	1009	80	76	87	7		270 - 1	84	7	225	090
1000	?	169 49		10	1009	81	77	88	7		270 - 1	84	8	325	280
1100	?	169		10	1009	83	79	88	8		270 - 2	84	8	280	100
1200	16 53	169 47	SC+	10	1007	84	80	88	7		070 - 1	84	7	070	010
1300	16 53	169 34		10	1007	85	80	84	7		070 - 1	84	7	070	069
1400	16 55	169 30		10	1007	83	78	92	7		070 - 1	84	4	070	069
1500	16 57	169 22		10	1006	80	77	91	6		070 - 1	84	5	070	069
1600	17 00	169 13		10	1006	80	77	91	4		070 - 1	84	5	070	069
1700	17 03	169 03		10	1007	82	78	88	4		070 - 1	84	5	070	
1800	17 04	168 54		10	1006	81	77	87	4		070 - 1	84	5	070	
1900	17 07	168 45		10	1006	79	75	87	4		070 - 1	84	5	070	
2000	17 20	168 38		10	1008	79	75	87	4		070 - 1	84	5	070	
2100	17 13	168 30		10	1008	79	75	87	4		070 - 1	84	5	070	
2200	17 16	168 21		10	1008	79	75	87	4		070 - 1	84	5	070	
2300	17 19	168 13		10	1008	79	75	87	4		070 - 1	84	5	070	
2400	17 31	168 06		10	1009	77	73	87	4		070 - 1	86	5	070	069

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 16 January 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP DRY B ^{SLP}	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17 29	167 52	SCT	10	76 1009	72	87	5		060 -1	86	5	060	069
0200	17 35	167 41	↓		75 1009	71	86	5		060 -1	86	5	060	
0300	17 40	167 30	↓		75 1008	71	86	5		060 -1	86	5	060	
0400	17 45	167 19	BKN		75 1009	71	86	5		060 -1	86	5	060	
0500	17 50	167 08			75 1009	72	91	6		060 -1	84	6	060	
0600	17 54	166 57			75 1009	72	91	6		060 -1	84	8	060	
0700	17 59	166 45			76 1009	73	91	8		060 -1	84	4	060	
0800	18 02	166 35			76 1009	73	91	8		060 -1	84	4	060	
0900	18 06	166 25			76 1009	73	91	8		060 -1	84	4	060	
1000	18 08	166 15			78 1009	74	87	6		060 -1	84	4	060	
1100	18 11	166 01			79 1009	75	87	6		060 -1	84	4	060	
1200	18 15	165 55			82 1007	77	84	6		060 -1	84	4	060	↓
1300	18 17	165 47			84 1007	79	84	6		060 -1	84	4	060	071
1400	18 18	165 40			83 1007	82	96	6		060 -1	84	4	060	
1500	18 19	165 32	↓		82 1007	82	96	6		060 -1	84	4	060	
1600	18 20	165 25	SCT		81 1008	78	92	5		060 -1	84	4	060	
1700	18 21	165 17	↓		79 1009	76	91	5		060 -2	84	4	060	
1800	18 22	165 07	↓		77 1009	74	91	5		060 -2	84	4	060	
1900	18 24	164 55	CLR		76 1009	66	70	1		060 -1	84	2	260	↓
2000	18 25	164 47			76 1010	62	62	1		060 -1	84	2	260	065
2100	18 29	164 38			77 1010	74	79	1		060 -2	84	5	267	
2200	18 33	164 29			76 1010	69	78	1		060 -2	84	4	267	↓
2300	18 37	164 20			75 1010	66	74	1		060 -2	84	3	357	
2400	18 40	164 10	↓	↓	75 1010	66	74	1		060 -2	84	3	357	↓

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 17 Jan 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	18 48	163 59	SCT	10	1010	76 3	72	87	3		000 - 2	83	3	357	065
0200	18 48	163 59			1011	76 4	70	82	3		000 - 2	83	3		
0300	18 52	163 52			1010	76 2	73	91	3		000 - 2	83	3		
0400	18 57	163 43			1010	76 2	73	91	3		000 - 2	83	3		
0500	19 01	163 33			1010	76 2	73	91	3		000 - 2	84	3		
0600	19 06	163 23			1010	76 2	73	91	3		000 - 2	83	3		
0700	19 10	163 13			1010	77 2	74	91	3		000 - 2	83	3		
0800	19 13	163 06	↓		1010	75 2	72	91	5		050 - 2	83	3	020	
0900	19 15	162 57	BRN		1010	76 4	70	82	7		050 - 2	83	4	070	070
1000	19 16	162 50			1011	77 3	73	87	7		070 - 2	83	5	090	
1100	19 18	162 41			1011	77 2	74	91	7		070 - 2	83	5	070	
1200	19 20	162 33			1011	77 2	74	91	7		070 - 2	83	4		
1300	19 22	162 24			1011	77 2	74	91	7		070 - 2	83	6		
1400	19 24	162 16			1011	78 3	74	87	7		070 - 2	83	6		
1500	19 27	162 07			1011	78 2	75	91	7		070 - 2	83	10		
1600	19 30	161 52			1011	79 4	73	83	8		070 - 2	83	10		
1700	19 32	161 50			1011	79 4	73	83	8		070 - 3	83	8		
1800	19 35	161 42			1011	78 4	72	83	8		070 - 3	83	8		
1900	19 38	161 33			1011	79 4	73	83	8		070 - 3	83	8		
2000	19 40	161 25			1011	79 4	73	83	8		070 - 3	83	8		
2100	19 45	161 16			1011	79 4	73	83	8		070 - 3	82	10	040	067
2200	19 49	161 06		↓	1011	79 4	73	83	8		070 - 3	82	10	045	
2300	19 55	160 56		8	1011	79 4	73	83	8		070 - 3	82	10	060	
2400	19 58	160 42	↓	10	1012	78 5	71	79	17		070 - 2	82	10	075	↓

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 4 JANUARY

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000	21-22	158-00W	Sct		10	1012	79	75	87	5		300	84	3	060	309
1100	21-22 N	158-00W	Sct		10	1013	79	75	87	5		200	84	3	060	322
1200	21-04.5N	158-03.5W	Sct		10	1012	81	76	87	5		350	81	2	060	309 209
1300	20 59.	158 08	Sct		10	1011	81	79	96	5		290	81	5	160	370
1400	20 59	158 16	Sct		10	1009	80	79	96	5		380	81	6	315	370
1500	20 58.5	158 23	Sct		10	1008	80	79	96	5		310	81	6	315	347
1600	20 55	158 29	Sct		10	1008	80	79	96	5		310	82	10	270	
1700	20 52	158 38	Sct		10	1008	80	79	96	5		210	81	10	270	
1800	20 49	158 47	Bkn		10	1009	78	75	89	6		210	81	10	270	
1900	20 47	158 53	Bkn		10	1010	76	73	91	7		380	82	5	290	
2000	20 45	159 01	Bkn		10	1010	78	75	89	7		380	83	9	300	
2100	20 42	159 12	Bkn		10	1010	78	75	89	7		370	83	12	310	
2200	20 38.5	159 24	Bkn		10	1011	78	75	89	7		360	83	12	300	
2300	20 35	159 35	Bkn		10	1011	76	75	89	7		260	81	12	300	
2400	20 31	159 47	Bkn		10	1011	75	75	96	7		360	81	12	300	347

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 18 Jan 1965

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	30 00	160 40	BKN	10	101.2	76	72	87	7		070-2	82	9	075	067
0200	20 04	160 30	SCT		101.3	75	71	86	5			82	8	075	
0300	20 04	160 25			101.3	75	71	86	4			82	8	075	
0400	20 13	160 20			101.2	74	71	89	4			81	8	075	
0500	20 17	160 00			101.3	74	71	89	4			81	8	075	065
0600	20 21	159 52			101.3	74	71	89	4			81	8	075	
0700	20 25	159 43			101.2	74	71	89	4			81	8	075	
0800	20 34	159 33		12	101.4	76	72	87	3		120-2	82	5	120	
0900	20 35	159 27		12	101.5	77	73	87	3			82	5	120	069
1000	20 40	159 18		12	101.5	77	73	87	3			82	5	120	067
1100	20 45	159 10		12	101.7	80	76	87	3			82	5	120	067
1200	20 48	158 59		15	101.3	81	77	88	3		300-4	83	7	165	072
1300	20 51	158 49		15	101.5	83	78	84	3			83	7	145	075
1400	20 55	158 37		15	101.5	83	79	88	3			83	7	145	
1500	20 56	158 24		15	101.4	84	80	88	3			82	7	165	
1600	21-00	158 18		10	101.5	83	79	88	4		0	82	6	120	090
1700	21-00	158 08	SCT	10	101.6				4	1 2 1		82	6	080	031
1800	21 08	158 02													
1900	21 15	157 57													
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

WG